



Western Refining Southwest LLC

A subsidiary of Marathon Petroleum Corporation

I-40 Exit 39
Jamestown, NM 87347

July 31, 2021

Mr. Kevin Pierard, Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

**RE: Response to Approval with Modifications
Annual Groundwater Monitoring Report Gallup Refinery - 2019
Western Refining Southwest Inc., Marathon Gallup Refinery
EPA ID #NMD000333211
HWB-WRG-20-013**

Dear Mr. Pierard:

Attached please find the response to comments contained in the New Mexico Environment Department (NMED) Approval with Modifications letter dated May 4, 2021. Replacement pages (two sets) and a full electronic copy are included in the attachments.

If you have any questions or comments regarding the information contained herein, please do not hesitate to contact Mr. John Moore at (505) 879-7643.

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,
Western Refining Southwest LLC, Marathon Gallup Refinery

Ruth A. Cade

Ruth Cade
Vice-President

Attachments

cc: D. Cobrain, NMED HWB
M. Suzuki, NMED HWB
T. McDill, NMOCD
L. King, EPA Region 6

G. McCartney, Marathon Petroleum Corporation
K. Luka, Marathon Petroleum Corporation
J. Moore, Marathon Gallup Refinery
H. Jones, Trihydro Corporation

ATTACHMENT 1
RESPONSE TO COMMENTS

New Mexico Environment Department (NMED) to Marathon Gallup Refinery (MGR) Comment Letter “Approval with Modifications Annual Groundwater Monitoring Report, Gallup Refinery - 2019” (May 4, 2021)

NMED Comment	MGR Response
<p>Comment 1:</p> <p>In the response to NMED’s Disapproval Comment 4, the Permittee states, “[w]here the laboratory reporting limit is greater than [the] applicable standard has been noted in the Report. The reporting limit that the laboratory was able to meet was greater than the applicable standard due to instrument limitations.” The sections of the Report where the pertinent discussion is provided must be identified in the response.</p>	<p>Response 1:</p> <p>The notes related to the laboratory reporting limit being greater than the applicable standard are included in Section 8 (Data Tables) of the “Annual Groundwater Monitoring Report, Gallup Refinery – 2019” (Report).</p>
<p>Comment 2:</p> <p>In the response to NMED’s Disapproval Comment 6, the Permittee states, “[b]ased on recent fluid measurements in the East and West LDUs, it appears that groundwater is leaking through the secondary containment and into the primary containment. The #2 API unit is now non-operational and the fluid level is approximately 13 to 15 feet below top of casing. The West LDU water level is within a few feet of the top of casing. If the API separator was leaking, it would be expected that the fluid levels would be equivalent. In addition, internal inspections have been completed of the API Unit and no leaks were identified. Upgrades to the wastewater treatment system were not completed prior to the refinery becoming indefinitely idled and at this time MPC does not plan to upgrade the wastewater treatment system.” The statement is unclear. In a response letter, address the following issues:</p> <p>A) The relationship between the NAPIS’s secondary and primary containments is not clear. Provide a figure of the NAPIS that depicts the secondary and the primary</p>	<p>Response 2:</p> <p>Following are MGR’s responses to the indicated issues. To clarify, API #1 refers to the West Bay; API #2 refers to the East Bay. The West / East nomenclature is used throughout these responses.</p> <p>An evaluation of the NAPIS was performed by MGR in May – June 2021, which included pulling the East Bay out of service for an extended period of time. The new data collected during the evaluation suggests that there is no communication between the NAPIS / LDU and groundwater in the area. This finding is reflected in MGR responses below.</p> <p>A. Primary containment system – the primary containment for the NAPIS is a 3/16” thick stainless steel (SS 316) liner that was fabricated and installed within each existing concrete bay of the NAPIS. This activity was performed in 2007. The liner is called out in Siemens Issued for Construction (IFC) drawings 42400-105 (plan view) and 42400-106</p>

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NMED Comment	MGR Response
<p>containment systems and explain how each is designed to prevent or contain leaks from the NAPIS.</p> <p>B) Clarify whether the #2 API unit refers to the East Bay of the NAPIS. The nomenclature used in the response must be consistent with the context of the Report; otherwise, provide a figure of the NAPIS that identifies each component of the NAPIS.</p> <p>C) The fluid level measured as approximately 13 to 15 feet below top of casing (toc) is presumably referring to the fluid level in the East LDU. According to the API Detector Leak Detection Units, dated August 5, 2013, the total depth of the East LDU is 11.82 feet. The reported fluid level exceeded the total depth of the East LDU. Provide clarification in the response letter.</p> <p>D) The Permittee states, “[t]he West LDU water level is within a few feet of the top of casing. If the API separator was leaking, it would be expected that the fluid levels would be equivalent.” The fluid levels in the latter sentence presumably refer to the fluid levels in the East and West Bays. The former sentence references the fluid level in the LDU. If the fluid level in the latter sentence refers to the fluid level in the LDUs, the statement would be incorrect because each LDU was independently installed on the secondary containment wall of the respective unit. Provide clarification in the response letter.</p> <p>E) The Permittee states, ”[b]ased on recent fluid measurements in the East and West LDUs, it appears that</p>	<p>(cross-section view A-A’). Areas of interest are highlighted with a red rectangle. The drawings are provided in Attachment 2.</p> <p>Secondary containment system – the secondary containment for the NAPIS consists of the pre-existing concrete bays. The bays were retrofitted with a polyurethane coating which was applied by MGR prior to installation of the SS 304 liner. The notes associated with the coating procedure are provided on IFC drawing 42400-104. The drawing is provided in Attachment 2.</p> <p>There is an interstitial space (3/8” gap) that was designed into the 2007 retrofit between the SS liner and the surface of the coated concrete bays. This void space collects any water that leaks from the primary SS liner. The water then flows within the void space to the south end of each bay respectively, where it is captured in the associated LDU. The LDU’s are called out on IFC drawing 42400-100 and 105 (plan view) and in detail on IFC drawing 42400-109 (Detail L). The drawings are provided in Attachment 2.</p> <p>B. API #1 refers to the West Bay; API #2 refers to the East Bay. This designation matches that shown on IFC drawing 42400-100 included in Attachment 2.</p> <p>C. The total depth of the East LDU is 12.78 ft below top of casing (TOC), which was confirmed with a groundwater</p>

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NMED Comment	MGR Response
<p>groundwater is leaking through the secondary containment and into the primary containment," and "[i]n addition, internal inspections have been completed of the API Unit and no leaks were identified." The statement is contradictory. Resolve the discrepancy in the response letter. In addition, the West LDU water level is measured within a few feet of the top of casing. The measurement indicates that the West Bay is leaking. Repair the leak or propose to install recovery wells adjacent to the West Bay of the NAPIS to capture the leaking wastewater.</p>	<p>probe on July 7, 2021. The depth to water measurements for the East LDU during recent monitoring activities (May – June 2021) did indicate a depth to water (DTW) in excess of 11.82 feet (the maximum depth to water measurement was 12.36 feet). The text referenced by NMED was likely a generic statement referring to water level in the East Bay of the API being at a much greater depth below the top of the wall. Review of the DTW data recorded on the field forms for the East LDU indicate that at no time since 2019 has the DTW been greater than 12.36 feet.</p> <p>D. MGR evaluated the NAPIS system during May and June of 2021. A summary report of the evaluation is included in Attachment 3. New data from this evaluation suggests that there is no leakage from the NAPIS or LDUs into groundwater.</p> <p>E. Attachment 3 provides a summary discussion of the NAPIS evaluation supporting the conclusion that neither NAPIS East Bay, NAPIS West Bay, nor their respective LDUs are in hydraulic communication with the local groundwater system.</p>

New Mexico Environment Department (NMED) to Marathon Gallup Refinery (MGR) Comment Letter “Approval with Modifications Annual Groundwater Monitoring Report, Gallup Refinery - 2019” (May 4, 2021)

NMED Comment	MGR Response
F) Since the NAPIS will not be upgraded, the Permittee must repair the leak or propose to install recovery wells adjacent to the West Bay of the NAPIS as directed by Comment 6 of the NMED’s Disapproval. If the Permittee elects to repair the leak on the West Bay, the East Bay must not be used during the repair since previous data collected from the East EDU indicates that the East Bay is also leaking. The East Bay also must be repaired prior to use.	F. Based on the evaluation provided as Attachment 3, the NAPIS East Bay, NAPIS West Bay, and their respective LDUs are not leaking. MGR will initiate a periodic inspection program of the NAPIS unit to look for potential degradation of the primary containment system (SS liner) and repairs will be initiated as needed.
Comment 3:	Response 3:
<p>In the response to NMED’s Disapproval Comment 16, the Permittee states, “[t]he gauging data from the December 3, 2019 sampling event is not available, however, the monitoring well completion log from October 17, 2019 is provided in Appendix A. The gauging data from OW- 58A from the completion date is included in Table 9.1.” Explain why the gauging data was not collected during the December 3, 2019 sampling event in the response letter.</p> <p>In addition, well OW-58A was installed in October 17, 2019 and the depth, to water gauged on the installation date (October 17, 2019) is recorded approximately four feet lower than that of the twin well OW-58. The lower groundwater elevation may be the result of slow recharge and a lack of groundwater equilibration. Therefore, the October 17, 2019 gauging data may not be consistent with the future data. Remove or qualify the gauging data, as appropriate, from all future reports.</p>	<p>Gauging did occur during the December 2019 sampling event; however, the data were stored on a computer that was inadvertently wiped without a backup to the MGR database. The following statement has been added to Section 2.8, “Deviations from Work Plan”, page 22:</p> <p>“Monitoring wells gauging data during the December 2019 sampling event were lost and are not included in this report.”</p> <p>Review of fluid level data collected in 2020 and 2021 shows that the difference in elevation between well OW-58 and well OW-58A ranges from approximately 0.6 ft to 2 ft. Based on the current data, MGR acknowledges the elevation data difference of 4 ft is most likely incorrect. The October 17, 2019 gauging data for OW-58A will not be included in future reports.</p>

New Mexico Environment Department (NMED) to Marathon Gallup Refinery (MGR) Comment Letter “Approval with Modifications Annual Groundwater Monitoring Report, Gallup Refinery - 2019” (May 4, 2021)

NMED Comment	MGR Response
Comment 4: In the response to NMED’s Disapproval Comment 17, the Permittee states, “[t]he analytical tables in Section 8 have been revised to list wells that had detections of SPH during 2019.” Table 8.5 still did not list wells OW-61 and OW-65 where SPH was detected. These wells must be included in analytical tables and the detection of SPH must be indicated. Revise the tables accordingly. This comment applies to all analytical tables where wells with SPH are not listed. Revise the tables and provide replacement pages.	Response 4: This comment is acknowledged. The revised tables are included as Attachment 4.
Comment 5: In the response to NMED’s Disapproval Comment 18, the Permittee states, “[f]luoride ions in groundwater may be naturally occurring or may be the result of refinery activities. If elevated concentrations continue MPC will conduct an investigation to determine the source of the fluoride.” Describe the potential refinery fluoride sources and whether fluoride concentrations in the groundwater samples collected from well OW-64 decreased during the 2020 monitoring events. If an elevated fluoride level persisted in 2020, propose to submit a work plan to conduct an investigation to determine the source of the fluoride in the response letter.	Response 5: MGR plans to complete a site-wide background concentration study based on the approved work plan “Response to Disapproval Investigation Work Plan Background Concentrations” dated September 26, 2019. This investigation includes fluoride analysis and will determine if the source of fluoride is naturally occurring.

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NMED Comment	MGR Response
Comment 6: In the response to NMED’s Disapproval Comment 22, the Permittee states, “MPC requests clarification on the NMED comment on the portion stating EDC is below the screening level.” To clarify, the New Mexico Water Quality Control Commission (WQCC) adopted revised regulations that listed 1,4-dioxane as a toxic pollutant on December 21, 2018. As such, the Permittee is required to analyze groundwater samples collected from all monitoring wells where chlorinated solvents have been detected in the past ten years for 1,4-dioxane using EPA Method 8270 Selective Ion Monitoring (SIM). Since the Permittee agreed to include 1,4-dioxane and EDB analyses using appropriate analytical methods for well OW-11 in the 2021 Facility-wide Groundwater Monitoring Work Plan, no response is necessary.	Response 6: This comment is acknowledged.
Comment 7: In the response to NMED’s Disapproval Comment 23, the Permittee states, “[n]itrate/nitrite chemistry can be subject to several factors, including precipitation, variation in wastewater system influent, seasonal temperature increases (which may spur biological growth and reducing conditions), and pond depth.” The nitrite concentrations in wastewater samples collected from the evaporation ponds (e.g., EP-7, EP-8, EP-9, EP-11) are generally one to two orders of magnitude higher than the nitrate concentrations. The data indicates the presence of highly reducing and anaerobic conditions in these ponds. Such anaerobic ponds may generate methane, unpleasant odor, and an acidic environment. In addition, aerated ponds would be more	Response 7: The 2019 pH data were reviewed to determine whether the ponds have created an acidic environment. The samples range between 6.59 and 8.63 indicating that the ponds are likely not in an acidic environment. While the refinery is in idled status the ponds are currently only being used on an as needed basis at less than the designed capacity. An evaluation of additional treatment, such as aeration, would only be warranted if the refinery returns to full-scale operation, including an assessment of biological and chemical oxygen demand.

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NMED Comment	MGR Response
efficient to degrade organic matter. Evaluate whether aerobic conditions should be maintained by mechanical or diffused aeration equipment in these ponds and provide a discussion in the response letter.	
Comment 8: In the response to NMED’s Disapproval Comment 25, the Permittee states, “[p]esticides are not manufactured onsite and previous pond samples had no detections therefore, and any of pesticides [used] by the facility would be in compliance with manufacturers recommendations and would not constitute a waste. MPC will not be adding pesticides to EP-2 analysis for 2021.” Bromomethane was also detected in the sample collected from outfall STP1 to EP-2 above the applicable standards during the fourth quarter of 2019; it appears that bromomethane is present at various locations in the Facility. Whether or not pesticides are manufactured onsite, bromomethane that may be associated with pesticides was detected from the samples at various locations. Since the Permittee asserts that the detection of bromomethane is not associated with pesticides, provide a discussion regarding the source of bromomethane and propose to investigate the source of bromomethane, if necessary, in the response letter.	Response 8: Bromomethane was only detected during 2019 from the two samples identified in NMED’s comment. Bromomethane was not detected anywhere else at the Refinery during the 2019 groundwater sampling event. MGR maintains that the bromomethane detections are likely from pesticides used by the facility. Based on the two locations where bromomethane was detected, it is likely that it was surface application of pesticides. Pesticides applied on-site were used in accordance with manufacturers recommendations and would not constitute a waste. MGR will not be investigating the source of bromomethane at the Refinery.

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NMED Comment	MGR Response
Comment 9: In the response to NMED’s Disapproval Comment 28, the Permittee states, “[t]he Executive Summary, page 8, has been revised in the Report.” The pertinent revised sentence in the Executive Summary states, “[b]romoethane was detected in STP-1 to EP-2 above the applicable standards during the 4th quarter of 2019.” According to Table 8.16.2, the referenced compound is bromomethane rather than bromoethane. Correct the typographical letter in future reports.	Response 9: This comment is acknowledged. The typographical error has been revised in this report.
Comment 10: In the response to NMED’s Disapproval Comment 33, the Permittee states, “[t]he process of purging using a bailer frequently creates significant difficulties in stabilizing parameters within 10% as air and turbulence are added to the fluid each time the bailer enters the well. MPC suggests that after 3 well volumes have been extracted from a well, the well water will have been purged sufficiently to be collecting a sample representative of the aquifer and time further spent trying to stabilize parameters is not necessary. MPC will include this process in the 2021 Facility-wide Groundwater Monitoring Work Plan.” The water entering the well is representative of the formation water; however, the water sample would not be representative of the formation water unless the sampling techniques are appropriate. In order to demonstrate that the sampling technique is appropriate, stabilization criteria for each sampling technique (e.g., bailer, low flow pump) must be established. Provide a discussion in the response letter.	Response 10: As stated in Appendix A (Investigation Methods) of the Facility Wide Groundwater Monitoring Work Plan – Updates for 2021, dated March 31, 2021: “Generally, at least three well volumes (or a minimum of two if the well has low recharge rate) will be purged from each well prior to sampling. Field water quality parameters measured during purging are pH, electrical conductivity, temperature, dissolved oxygen (DO), and oxidation-reduction potential (ORP). One or more parameters must stabilize to within 10 percent (%) for a minimum of three consecutive measurements before collecting groundwater samples using low-flow sampling techniques. When purging wells using a bailer, bailing will be considered complete when three well volumes have been removed from the wells. Field parameters will be measured and recorded while bailing, with the understanding that the process of hand-bailing may prevent stabilization of field parameters. Once purging requirements are met, the well is ready for sample collection.”

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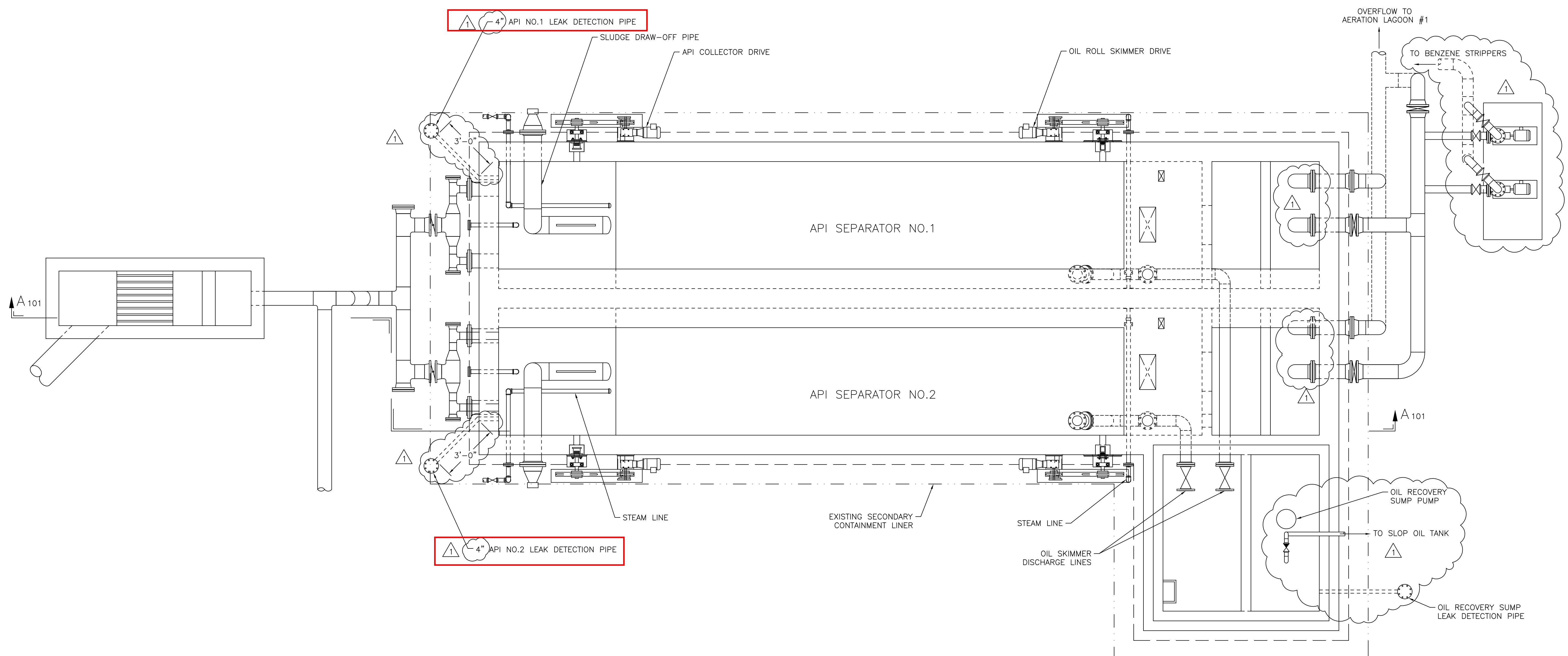
NMED Comment	MGR Response
Comment 11: In the response to NMED’s Disapproval Comment 34, the Permittee states, “Table 2.1 has been included with the revised Report.” However, Table 2.1 is not included in the Report. Provide the table with the response letter.	Response 11: Table 2.1 has been included with this response letter in Attachment 4.
Comment 12: In the response to NMED’s Disapproval Comment 39, the Permittee states, “[t]he analytical results have been highlighted blue in the tables to indicate where the analysis was only completed as a single value rather than separate results,” and “MPC has coordinated with the lab to analyze the samples within 48 hours for nitrite and nitrate.” It is not clear why the Permittee continues to report nitrate and nitrite analytical results as a single value for some wells although the issue associated with short holding time was resolved. The Permittee must report separate nitrate and nitrite analytical results in the future, as directed by previous comments.	Response 12: This comment is acknowledged.
Comment 13: In the response to NMED’s Disapproval Comment 43, the Permittee states, "MPC will continue to monitor the process wells semiannually." According to Section 10, Table 1, Gallup Refinery - 2019 Ground Water Monitoring Schedule, wells PW-2 and PW-4 are required to be monitored quarterly and well PW-3 is required to be monitored every three years. Resolve the discrepancy and provide replacement pages.	Response 13: The response to NMED’s Disapproval Comment 43 was incorrect. Wells PW-2 and PW-4 are monitored quarterly and well PW-3 is monitored every three years. Section 10, Table 1 is correct as written. No revisions or replacement pages are required.

New Mexico Environment Department (NMED) to Marathon Gallup Refinery (MGR) Comment Letter “Approval with Modifications Annual Groundwater Monitoring Report, Gallup Refinery - 2019” (May 4, 2021)

NMED Comment	MGR Response
Comment 14: <p>In the response to NMED’s Disapproval Comment 53, the Permittee states, “Table 8.8.2 has been revised. The mercury results have been changed from mg/L to ug/L so that the detections are appropriate for the results.” Table 8.8.2 appropriately presents the mercury results with ug/L; however, other tables that present the mercury results were not revised and still present the values with mg/L. Revise all tables to report the mercury results with ug/L for consistency in future reports.</p>	Response 14: <p>This comment is acknowledged. This and future reports will present the mercury data in ug/L.</p>

ATTACHMENT 2
NAPIS/LDU DRAWINGS

NORTH



API SEPARATOR AND OIL RECOVERY SUMP PLAN VIEW						
GIANT INDUSTRIES, INC CINIZA REFINERY, GALLUP, NM						
SIEMENS Water Technologies WAUKESHA, WI 262-547-0141						
DESIGNER	DATE	TITLE				
DJS	04/16/07	API SEPARATOR AND OIL RECOVERY SUMP	PLAN VIEW			
CHECKER	DATE					
JLF	04/18/07					
ENGINEER	DATE					
JLF	04/18/07					
MANAGER	DATE					
JLF	04/18/07					
FILE:						
PROJECT	CODE	DRAWING				
S00062		42400-100	1	OF	1	REV

Outline added for notations related to primary and secondary containment.

SUGGESTED INSTALLATION PROCEDURE AND NOTES

1. REMOVE EXISTING API AND OIL SUMP EQUIPMENT WITHIN THE CONCRETE TANKS RECEIVING LINERS.
2. CUT EXISTING EQUIPMENT ANCHOR BOLTS (UNLESS NOTED OTHERWISE) FLUSH WITH CONCRETE SURFACE.
3. REMOVE ALL UNNECESSARY PULTRUSIONS FROM INSIDE TANK. CUT AND REMOVE (IF NECESSARY) EXISTING 8" EFFLUENT AND OVERFLOW PIPES TO ALLOW INSTALLATION OF LINER.
4. INSTALL 2" LEAK DETECTION PIPES IN SLUDGE HOPPER AND CORE DRILL 1" LEAK DETECTION DRAINS AT EFFLUENT WALLS.
5. CORE DRILL DRIVE SHAFT STUFFING BOX OPENINGS FOR COLLECTOR AND OIL ROLL. OPENING TO BE SUFFICIENT FOR 8" SIZE PIPE SLEEVE.
6. COAT INSIDE SURFACES OF TANK WITH POLYURETHENE (CLIENT).
7. CONFIRM FIELD MEASUREMENTS PRIOR TO CONSTRUCTION.
8. INSTALL PIPE COLLAR PLATES AT EXISTING TANK NOZZLES.
9. INSTALL DRIVE SHAFT STUFFING BOX SLEEVES FOR COLLECTOR AND OIL ROLL. GROUT GAP BETWEEN SLEEVE AND CORED HOLE THEN INSTALL SLEEVE COLLAR PLATES.
10. INSTALL SLUDGE HOPPER, COLLECTOR, EFFLUENT CHAMBER AND OIL SUMP FLOOR LINER PLATE.
11. INSTALL SLUDGE HOPPER, COLLECTOR, EFFLUENT CHAMBER AND OIL SUMP WALL LINER PLATE, EXPANDABLE ANCHORS AND CORNER ANGLES. LUBRICATE EXPANDABLE ANCHORS PRIOR TO SEAL WELDING CLOSURE PLATES.
12. INSTALL WEIR PLATE MOUNTING STUDS.

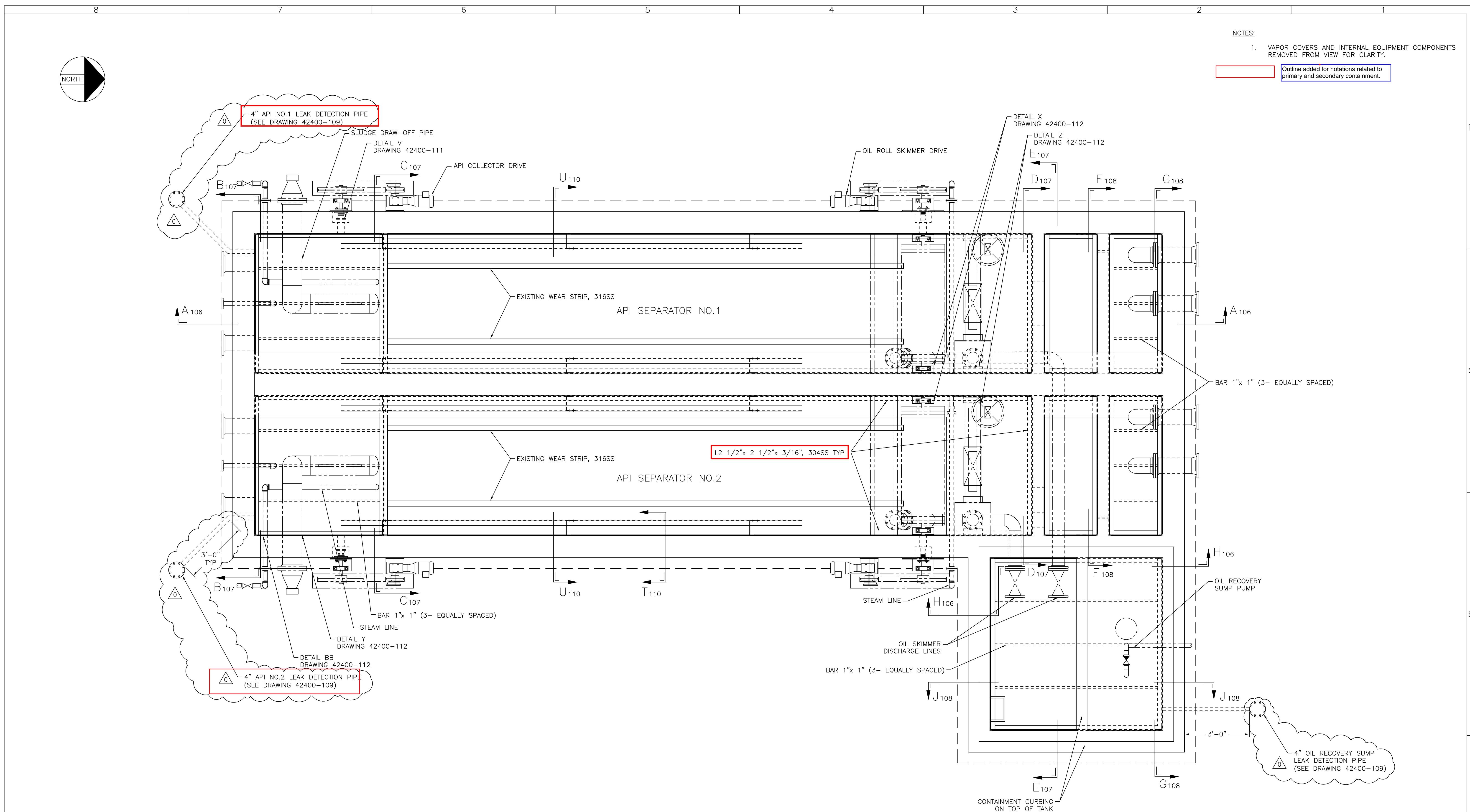
GENERAL NOTES

1. DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS.
2. MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS UNLESS NOTED:
 - SHEETS AND PLATE - STAINLESS STEEL AISI 304
 - ANGLE AND BAR - STAINLESS STEEL AISI 304
 - WELD MATERIAL - COMPOSITION EQUIVALENT TO 304 - ASTM 308 (E309 FOR C.S. TO S.S.)
 - ANCHORS - STUD TYPE (HILTI 3 OR FOAL) 304SS
 - POLYURETHENE CONCRETE COATING SHERWIN WILLIAMS SUFLEX ELASTOMERIC POLYURETHENE (60-100 MILS TOTAL DFT) BY CLIENT
 - JOINT SEALANT - SIKAFLLEX - BY CLIENT
 - LUBRICANT - MOBILITH SHC 100 SYNTHETIC BEARING GREASE
 - EXPANSION SEALANT - VITON CAULK THEMODYN CORP. FLUORODYN OR EQUAL
 - EPOXY CONCRETE PATCH - SIKADUR 43 PATCH PAK OR EQUAL
 - SPACER BOARD - 3/8" x 6x6 COMPRESSIBLE LOW DENSITY STYROFOAM BLOCK TO HOLD GAP DURING INSTALLATION
 - GROUT - FIVE STAR PRODUCTS INC., FIVE STAR® METALLIC NONSHRINK FLUID GROUT
3. ALL WELD CONNECTIONS TO BE IN ACCORDANCE WITH THE LATEST ASME STRUCTURAL WELDING CODE, SECTION IX, PERFORMED BY CERTIFIED WELDERS. (SEE DOCUMENT 42400WP)

WELDING NOTES

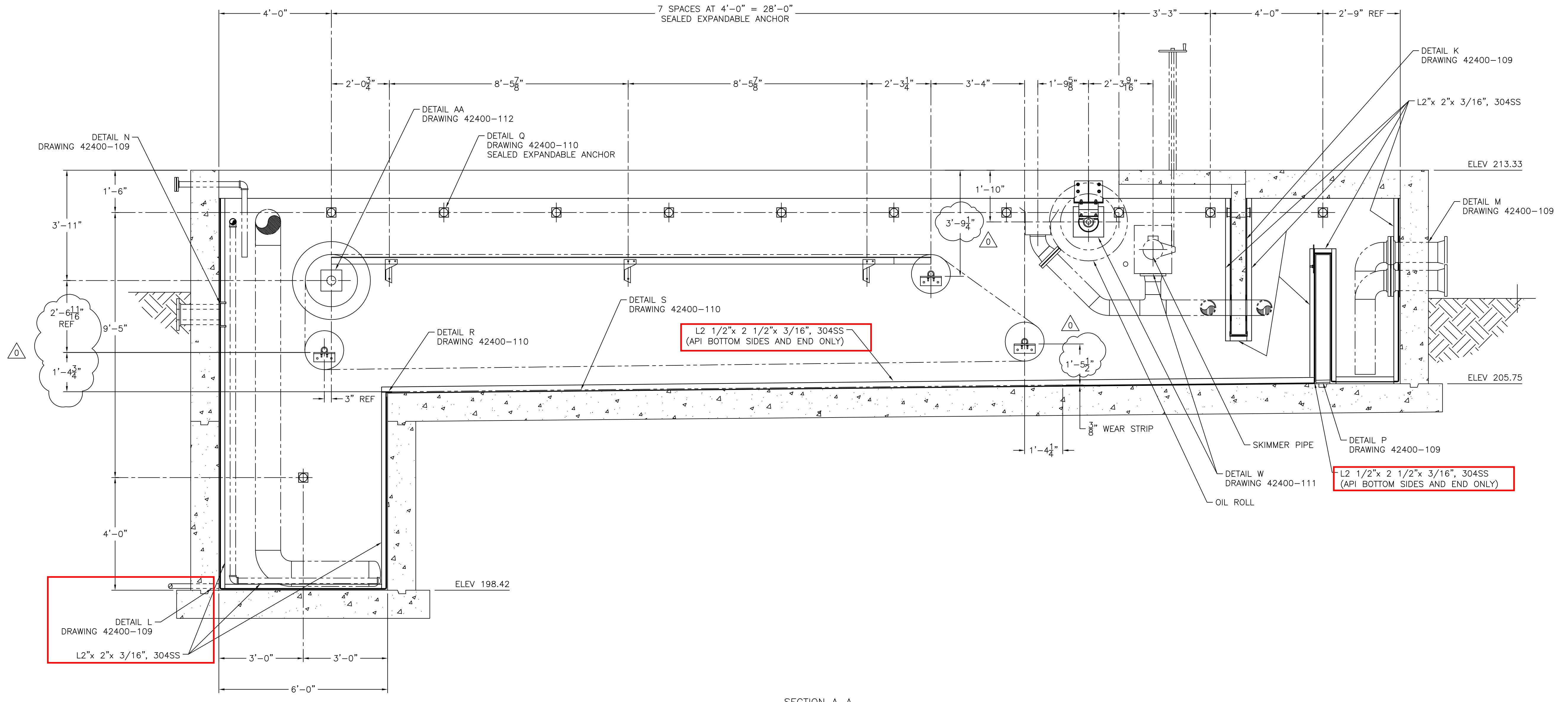
1. PROVIDE FOR PROPER HEAT DISSIPATION USING SEVERAL LIGHT PASSES TO COMPLETE THE WELD.
2. WELD AREA TO BE CLEANED BEFORE AND AFTER WELDING CARBON STEEL FILES AND BRUSHES SHOULD NOT BE USED.
3. ALL WELDS TO BE 1/8" SEAL WELDS WHERE REQUIRED FOR PROPER CONTAINMENT, UNLESS OTHERWISE NOTED.
4. CARBON TO STAINLESS WELDS WILL INCLUDE BUTTERING THE CARBON SURFACE WITH A LAYER OF TYPE E309 WELD MATERIAL. JOINT IS TO BE COMPLETED WITH TYPE E308 WELD MATERIAL.

GENERAL ARRANGEMENT SPECIFICATIONS FOR API SEPARATOR LINER									
GIANT INDUSTRIES, INC CINZA REFINERY, GALLUP, NM									
SIEMENS Water Technologies WAUKESHA, WI 262-547-0141									
O	ISSUED FOR CONSTRUCTION REVISED PER 06/06/07 SITE MEETING	06/12/07	DJS	JLF	JLF	DESIGNER DJS 05/04/07	CHECKER JLF 05/04/07	ENGINEER JLF 05/04/07	TITLE GENERAL ARRANGEMENT SPECIFICATIONS FOR API SEPARATOR LINER
A	ISSUED FOR APPROVAL AND INTERNAL REVIEW	05/22/07	DJS	JLF	JLF	MANAGER JLF 05/04/07	FILE: PROJECT CODE DRAWING SHEET REV	CLIENT GIANT INDUSTRIES, INC CINZA REFINERY, GALLUP, NM	
STD: 1-0200-24X36D1	INTL REF:	BAR = 1" AT PLOT SCALE	REV	DESCRIPTION	DATE	DWN	CHKD	APVD	ECN



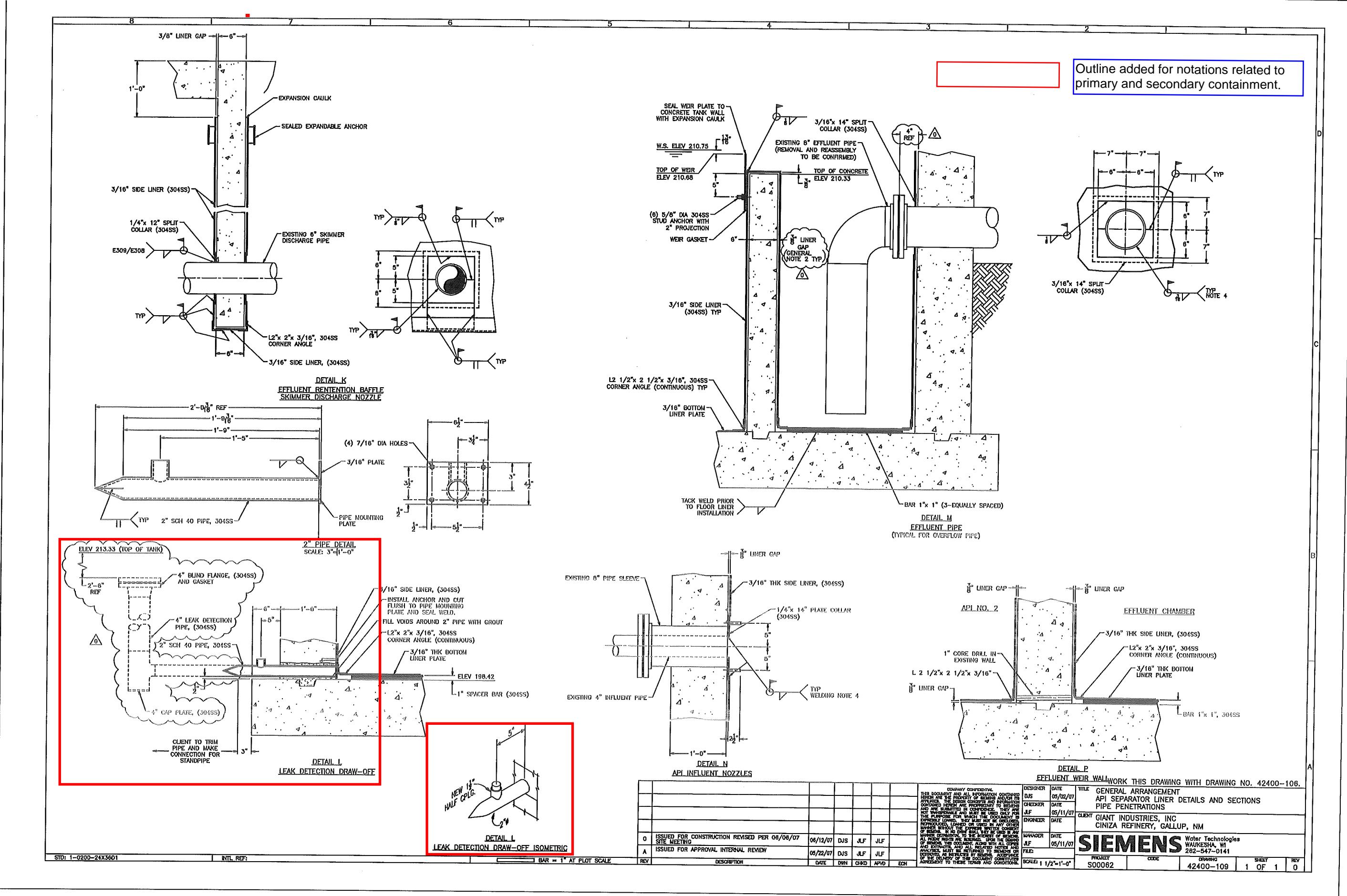
GENERAL ARRANGEMENT API SEPARATOR AND OIL RECOVERY SUMP PLAN VIEW LINER INSTALLATION									
SIEMENS Water Technologies WAUKESHA, WI 262-547-0141									
ITEM	DESCRIPTION	DATE	DWN	CHKD	APVD	ECN	DESIGNER	DATE	TITLE
O	ISSUED FOR CONSTRUCTION REVISED PER 06/06/07 SITE MEETING	06/12/07	DJS	JLF	JLF		Designer DJS	05/14/07	GENERAL ARRANGEMENT API SEPARATOR AND OIL RECOVERY SUMP PLAN VIEW LINER INSTALLATION
A	ISSUED FOR APPROVAL AND INTERNAL REVIEW	05/22/07	DJS	JLF	JLF		Checker JLF	05/15/07	
							Engineer JLF	05/15/07	Client GIANT INDUSTRIES, INC CINIZA REFINERY, GALLUP, NM
							Manager JLF	05/15/07	
							File:		
							Project S00062	Code 42400-105	Drawing 1/2"=1'0"
							Sheet 1 OF 1		Rev 0

Outline added for notations related to primary and secondary containment.



SECTION A-A

COMPANY CONFIDENTIAL THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF SIEMENS AND/OR ITS AFFILIATES. THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN ARE PROPRIETARY TO SIEMENS AND ARE SUBMITTED IN CONFIDENCE. THEY ARE NOT TO BE COPIED, REPRODUCED, TRANSMITTED BY ANY MEANS, OR USED IN ANY OTHER MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SIEMENS. THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN ARE TO BE RETURNED TO THE CUSTODIAN OF SIEMENS. THIS DOCUMENT, ALONG WITH ALL COPIES AND EXTRACTS, AND ALL RELATED NOTES AND ANALYSIS, SHALL BE DESTROYED, OR DESTROYED AS INSTRUCTED BY SIEMENS. ACCEPTANCE OF THE DELIVERY OF THIS DOCUMENT CONSTITUTES AGREEMENT TO THESE TERMS AND CONDITIONS.											DESIGNER	DATE	TITLE
										JUS	05/14/07	GENERAL ARRANGEMENT API SEPARATOR AND OIL RECOVERY SUMP ELEVATION VIEW LINER INSTALLATION	
										JLF	05/15/07	CHECKER DATE	
										GIANT INDUSTRIES, INC		CLIENT	
O	ISSUED FOR CONSTRUCTION REVISED PER 06/06/07 SITE MEETING	06/12/07	JUS	JLF	JLF					Water Technologies WAUKESHA, WI 262-547-0141			
A	ISSUED FOR APPROVAL AND INTERNAL REVIEW	05/22/07	JUS	JLF	JLF					MANAGER	05/15/07		
		REV	DESCRIPTION	DATE	DWN	CHKD	APVD	ECN		FILE:			
STD: 1-0200-24X36D1	INTL REF:		BAR = 1" AT PLOT SCALE						SCALE: 1/2"=1'0"	PROJECT	CODE	DRAWING	SHEET
										S00062		42400-106	1 OF 1 REV 0



ATTACHMENT 3
NAPIS INSPECTION REPORT



July 9, 2021

Mr. John Moore, P.E.
Environmental Supervisor
Marathon Petroleum Corporation
El Paso and Gallup Refineries

RE: NAPIS Inspection - Summary of Findings
Marathon Petroleum Company Gallup Refinery Division

Dear Mr. Moore:

Trihydro Corporation (Trihydro) has prepared this letter report summarizing our findings to date on potential leaking of the new American Petroleum Institute oil/water separator (NAPIS) at the Gallup refinery. This summary incorporates data and observations from the following chronological events:

- May 12, 2021 to present. The NAPIS East Bay was emptied on May 12, 2021. Inspections have been performed periodically to document ongoing conditions. The task was performed to address the potential for communication between the East Bay and the surrounding groundwater environment. Drawings illustrating the configuration of the NAPIS and LDUs are included in Attachment 1. Siemens Issued for Construction (IFC) Drawing 42400-100 shows the NAPIS in plan view. API Separator No. 1 represents the West Bay of the unit; API Separator No. 2 represents the East Bay. Siemens IFC Drawing 42400-106 provides a cross-section view of the East Bay.
- May 26, 2021 to present. Leak detection unit (LDU) East and West monitoring wells were evacuated (by vac truck) and monitoring of LDU recharge level and rate was conducted. This activity was performed to evaluate the potential for leakage to/from the NAPIS to the LDUs and also potential for communication between the LDUs and groundwater.
- June 9, 2021. Onsite inspection of NAPIS, including measurement of key dimensions and visual inspection of the empty East Bay for corrosion.
- Historical analytical data from groundwater sampling of wells adjacent to the NAPIS was compared to analysis of water samples collected from the East and West LDUs.

Findings and associated conclusions for these events are presented below. A summary of the NAPIS construction is provided. A cross section of the area, including the NAPIS and solid waste management unit (SWMU) 1, is shown in Figure 1. This figure also includes historical water levels from local monitoring wells. This topographical data is based on an unmanned aerial survey flight conducted in November 2018.



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SUMMARY OF NAPIS CONSTRUCTION

The NAPIS was constructed with two concrete treatment bays (East and West) that provide redundancy for continuous operations of the oil/water separator system. The NAPIS bays were retrofitted in 2007 with a 60 – 100 mil polyurethane coating applied to the concrete followed by installation of a 3/16-inch (") stainless steel grade 316 (SS 316) liner. A 3/8" interstitial space separates the steel liner from the concrete wall. This interstitial space is monitored by the LDU for each respective bay. The LDU's are called out on Siemens IFC drawings 42400-100 and 105 (plan views) and in detail on IFC drawing 42400-109 (Detail L) all of which are included in Attachment 1.

EAST BAY NAPIS PERIODIC INSPECTIONS

The East Bay of the NAPIS was removed from service and all liquids pumped out on May 12, 2021. The East Bay has been inspected periodically to document the presence/absence of fluids within the bay. Observations indicate that the bay has been dry since it was removed from service on May 12. Several photographs of the East Bay and corresponding dates are shown in Attachment 2.

LDU EVACUATION AND RECHARGE TEST

On May 26, 2021, a recharge test began in the LDUs to evaluate the potential for water migration between the API bays, the LDUs and groundwater. At the start of the test, the West Bay was full to a depth of 33.25" below the wall height, which is the normal operations depth of the NAPIS based on available design drawings. The East Bay was empty. These conditions remained largely unchanged since the start of the test.

Water levels within the LDU monitoring wells were recorded prior to evacuation of the water from the monitoring wells using a vacuum truck. Each LDU was evacuated 3 times in 15 minutes, at which point the LDUs were allowed to recharge, with periodic depth to water (DTW) measurements conducted until June 14, 2021.

Table 1 summarizes the recharge test data. Within the table, data are provided that include the water level data in the LDUs with respect to the top of casing of the monitoring wells, below ground surface at the NAPIS, and below wall height of the NAPIS. Figure 2 presents a graph of the water levels in the LDUs as a function of elapsed time.

Table 2 presents the calculated recharge rate in gallons per minute and milliliters/min (mL/min), based on the water levels in the LDUs presented in Table 1. Figure 3 presents a combined view of the historical water levels in monitoring wells adjacent to the NAPIS, and also includes the graph of water levels shown in Figure 2.



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ONSITE INSPECTION OF THE NAPIS

On June 9, 2021, Trihydro engineers conducted a site visit to inspect the NAPIS and conduct measurements of the LDUs and related dimensions. Visual observation of the NAPIS empty East Bay was conducted with the aid of binoculars to assess the general condition of the side walls and penetrations. Findings include:

- Intake pipe penetrations appear sound with welds observed to be in good condition.
- Generalized wall scaling was evident which makes evaluation of wall integrity difficult.

An area of pitting corrosion and a hole approximately 1/8" in diameter was observed in one spot on the north end of the water side of the East Bay, approximately at the typical water line (1.8 feet [ft]) from the top of the NAPI. Penetration through the 3/16" stainless steel liner to the concrete was evident.

Photographs of this area are included in Attachment B.

COMPARISON OF LDU AND NAPIS WELLS HISTORICAL ANALYTICAL DATA

LDUs (LDU-East and LDU-West) and monitoring wells in the immediate vicinity of the NAPIS (NAPIS-1, NAPIS-2, NAPIS-3 and KA-3) are sampled as part of the groundwater monitoring program at the Refinery. Attachment 3 presents selected tables from the 2019 Annual Groundwater Monitoring Report for the LDU and NAPIS wells. Analytes included volatile organic compounds, semi-volatile organic compounds, and metals. Several observed trends included higher concentrations of analytes in the LDU versus NAPIS monitoring wells, including BTEX constituents. Manganese and chromium, which are components of stainless steel. Chromium is present in the LDU versus largely absent in the surrounding NAPIS wells while manganese concentrations in the LDUs are much higher than those in NAPIS-2. This indicates that water samples collected from the LDUs contain higher concentrations of water which is exposed to the SS 316 liner and conversely that associated impacts to groundwater are not present.

EVALUATION FINDINGS

Following assessment of the NAPIS and a review of collected data, several findings are evident:

1. As shown in Figure 3, initial (time zero) water levels in the LDUs are above historical (2011-2020) local groundwater levels (minimum, maximum and average). Therefore, groundwater is not moving into the LDUs due to the higher head within the LDUs during typical operations.
2. The observed water levels within the East LDU indicates some minor recharge of water within the LDU (Figure 2) following evacuation of the bay on May 26, 2021. As was noted previously, a small hole was observed in the north wall of the East Bay. This hole (or potentially others that were not noted during the initial inspection) may have allowed water to migrate into the interstitial space between the SS liner and the coated concrete containment wall during normal operations. Any water



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within the interstitial space will make its way into the LDU as designed. The leveling of the recharge curve indicates that the draining of the interstitial water is largely complete. In addition, the recharge level within the LDU has stabilized below local groundwater as shown by the historical ranges for the nearby wells. A leak within the LDU would result in a continued increase in the recharge level to equilibrium with the surrounding groundwater level. Therefore, the data suggests that there is no hydraulic communication between the NAPIS East Bay and the surrounding groundwater.

3. Similarly, the water level in the West LDU indicated some drainage from the interstitial space following evacuation of fluids. However, the West Bay continues to operate at normal water levels. The recharge rate of the West LDU is somewhat higher than that of the East LDU (Table 1 and Figure 2). It is possible that the West Bay contains some minor imperfections that permit water flow into the West LDU. However, close inspection of the unit was not possible due to ongoing operations. With the West Bay operational and full of water and the East Bay out of operation and empty, this suggests that the higher water level and greater head in the West Bay is driving the higher West LDU water levels, and is also driving the relatively higher recharge rates shown in Table 2.
4. The West LDU recharge rate over the period June 2 to June 8, 2021 (148.7 hours) was 0.16 mL/min, or a total of 1.4 liters. The East LDU recharge rate over the same period was 0.03 mL/min, or a total of 0.27 liters. These rates and cumulative totals were based on the level changes in the LDUs over that period. Therefore, there does appear to be leakage through the SS 304 liners on both NAPIS bays. As shown in Table 2, these leakage rates are extremely low.
5. If the West LDU water level returns to the level of water within the West Bay NAPIS, the evidence for the absence of a leak from the West LDU and NAPIS West bay into groundwater is stronger. Additional recharge time will be required to assess this trend.
6. Several analytes including manganese and chromium are elevated in the LDU wells relative to the NAPIS monitoring wells. These analytes are components of stainless steel, of which the NAPIS liner was constructed. This also suggests that groundwater is not a source for the water detected in the LDUs. Alternatively, the absence of chromium in NAPIS monitoring wells suggests that the LDU's are not leaking to area groundwater.

CONCLUSIONS

1. The current data suggest that there is no leakage from the NAPIS or LDUs into groundwater. The chromium historical analytical data for the LDU and NAPIS monitoring wells underscores this conclusion.
2. There is evidence for a low rate of leakage through the SS 316 liner into the interstitial space of both the East and West Bay of the NAPIS. Observed corrosion in the East Bay SS 316 liner supports this conclusion. The addition of a polyurethane coating on the concrete walls prior to installation of the SS 316 liner prevents leakage into groundwater.



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3. A program of NAPIS SS 316 liner inspection and maintenance may be considered to reduce the potential for migration of water from the bays into the LDUs.

If you have any questions, please do not hesitate to contact us at (307) 745-7474.

Sincerely,
Trihydro Corporation

A blue ink handwritten signature of the name Heidi Jones.

Heidi Jones
Client Manager

697-067-002

Attachments

cc: Ms. Kateri Luka

TABLES

**TABLE 1. LDU WATER LEVEL DATA, NAPIS UNIT
MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO**

West LDU						East LDU					
Date	Time	DTW, TOC	DTW, BGS	DTW, BW	Comment	Date	Time	DTW, TOC	DTW, BG	DTW, BW	Comment
5/26/2021	11:15	3.03	0.2	5.26	Initial check and vac to empty	5/26/2021	11:15	3.73	1.55	6.21	Initial check and vac to empty
5/26/2021	11:28	12.39	9.56	15.22	check recharge and vac empty	5/26/2021	11:35	11.85	9.67	14.33	check recharge and vac empty
5/26/2021	11:33	8.95	6.12	11.78	check recharge and vac empty	5/26/2021	11:55	6.7	4.52	9.18	check recharge and vac empty
5/26/2021	11:57	12.61	9.78	15.44	Check Recharge	5/26/2021	12:01	12.36	10.18	14.84	Check Recharge
5/26/2021	12:21	11.67	8.84	14.5	Check Recharge	5/26/2021	12:22	12.25	10.07	14.73	Check Recharge
5/26/2021	12:59	10.72	7.89	13.55	Check Recharge	5/26/2021	12:59	12.12	9.94	14.6	Check Recharge
5/27/2021	9:35	10.95	8.12	13.78	Check Recharge	5/27/2021	9:35	11.95	9.77	14.43	Check Recharge
5/27/2021	16:20	10.88	8.05	13.71	Check Recharge	5/27/2021	16:20	11.85	9.67	14.33	Check Recharge
6/1/2021	8:25	9.55	6.72	12.38	Check Recharge	6/1/2021	8:25	11.65	9.47	14.13	Check Recharge
6/2/2021	6:42	9.39	6.56	12.22	Check Recharge	6/2/2021	6:45	11.53	9.35	14.01	Check Recharge
6/8/2021	11:30	8.82	5.99	11.65	Check Recharge	6/8/2021	11:30	11.41	9.23	13.89	Check Recharge
6/14/2021	11:23	8.45	5.62	11.28	Check Recharge	6/14/2021	11:23	11.33	9.15	13.81	Check Recharge

Notes:

BGS - below ground surface

TOC - top of casing (top of LDU well)

West LDU Height (from ground)= 2.83 ft

BW - below wall (top of NAPI concrete wall)

East LDU Height (from ground) 2.18 ft

DTW - depth to water

West LDU Height Below Wall 2.23 ft

LDU - leak detection unit (well)

East LDU Height Below Wall 2.48 ft

**TABLE 2. LDU RECHARGE RATE, NAPIS
MARATHON GALLUP REFINERY, GALLUP, NEW MEXICO**

Actual Date Time	Elapsed Hours	West LDU			East LDU		
		DTW, BW, ft	GPM	mL/min	DTW, BW, ft	GPM	mL/min
5/26/21 11:57	0	15.44	NA	NA	14.84	NA	NA
5/26/21 12:21	0.4	14.5	2.59E-02	98.12	14.73	3.03E-03	11.48
5/26/21 12:59	1.0	13.55	1.65E-02	62.63	14.6	2.26E-03	8.57
5/27/21 9:35	21.6	13.78	-1.23E-04	-0.47	14.43	9.09E-05	0.34
5/27/21 16:20	28.4	13.71	1.14E-04	0.43	14.33	1.63E-04	0.62
6/1/21 8:35	140.6	12.38	1.31E-04	0.49	14.13	1.96E-05	0.07
6/2/21 6:45	162.8	12.22	7.95E-05	0.30	14.01	5.96E-05	0.23
6/8/2021 11:30	311.5	11.65	4.22E-05	0.16	13.89	8.89E-06	0.03
6/14/2021 11:23	455.4	11.28	2.83E-05	0.11	13.81	6.13E-06	0.02
Change from time zero(to date)		4.16			1.03		

Notes:

BGS - below ground surface

LDU - leak detection unit (well)

BW - below wall (top of NAPI concrete wall)

NA - not applicable

DTW - depth to water

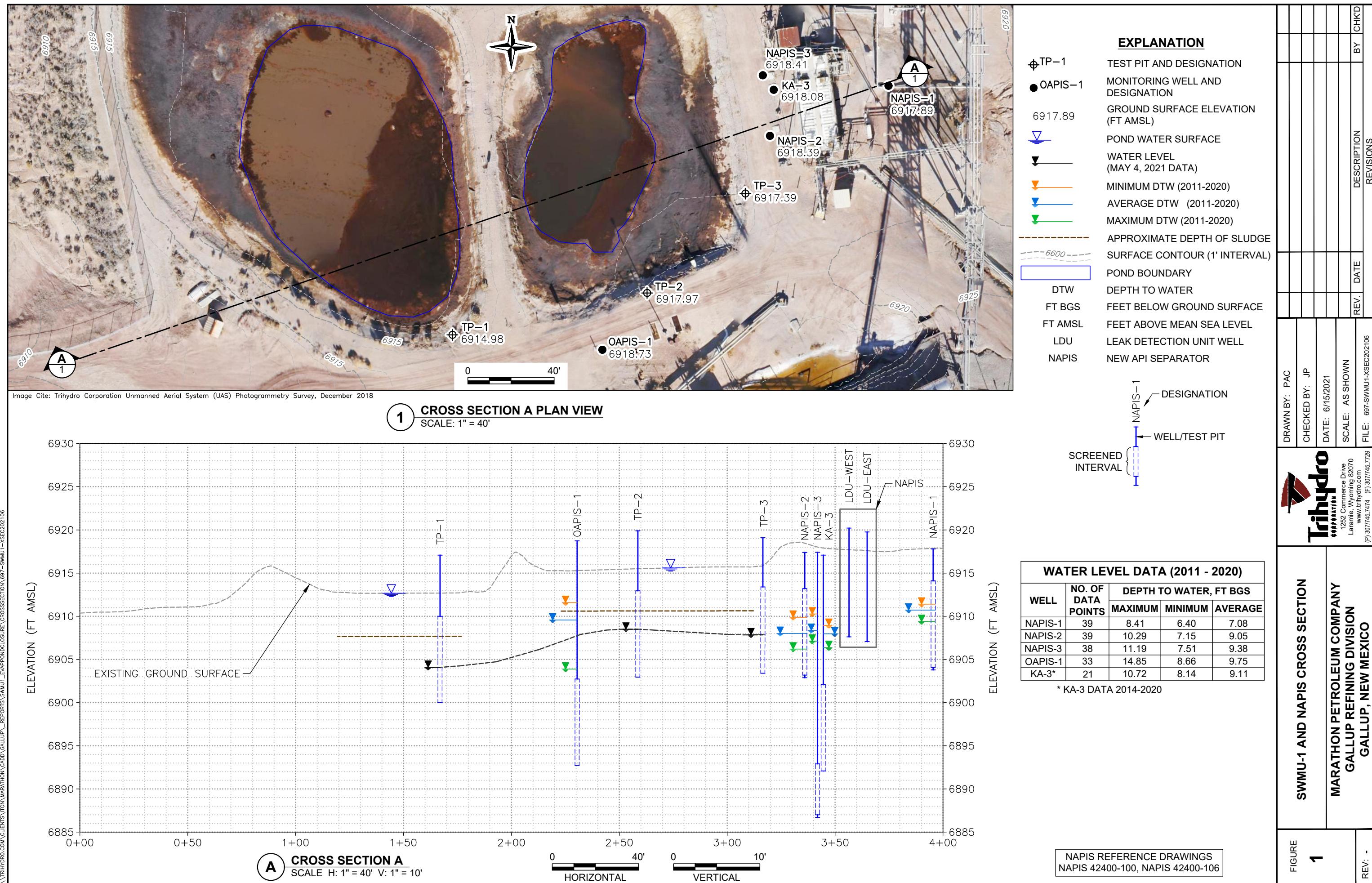
mL/min - milliters per minute

GPM - gallons per minute

4" Sch40 volume

0.661 gal/ft

FIGURES



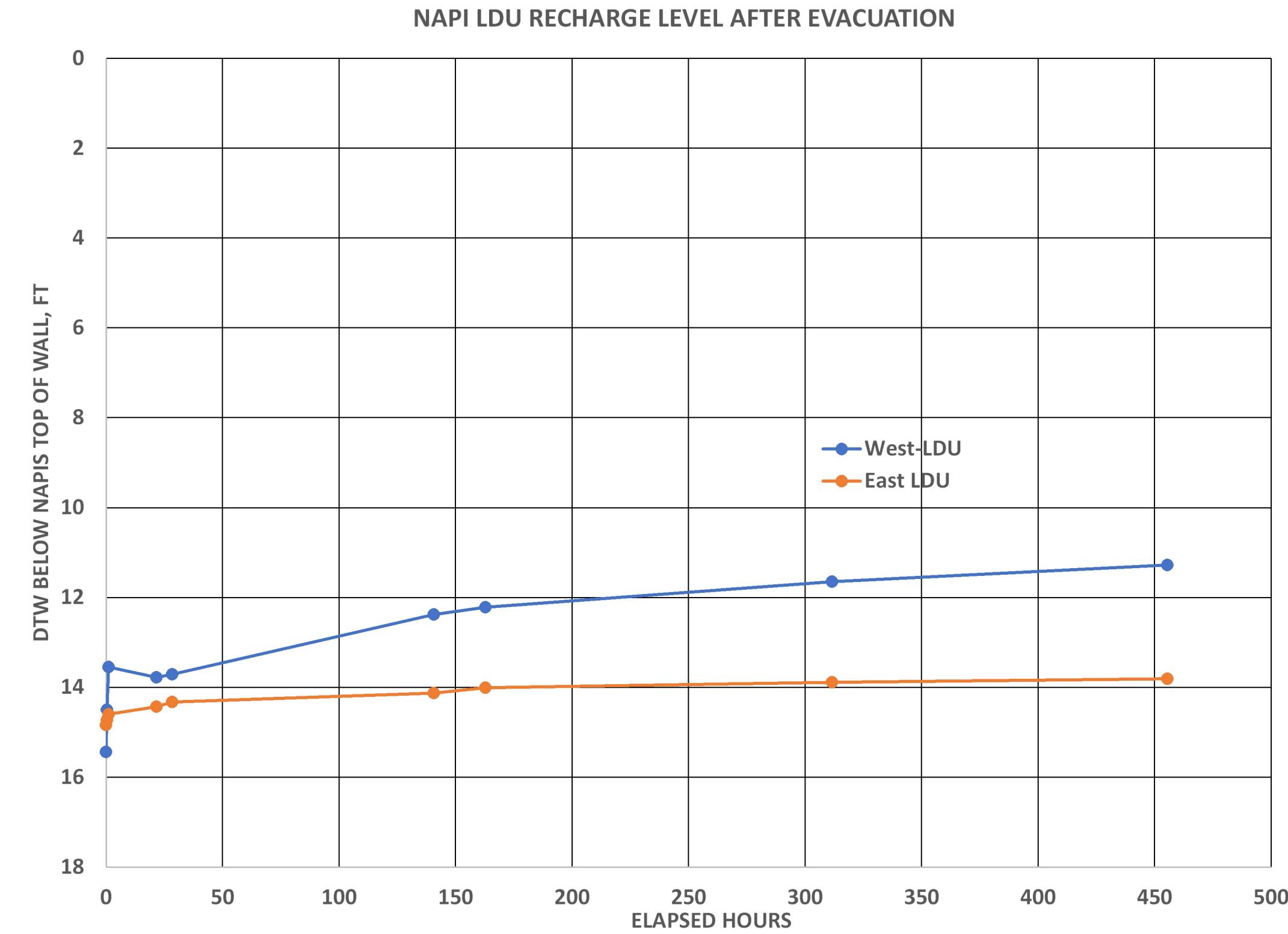
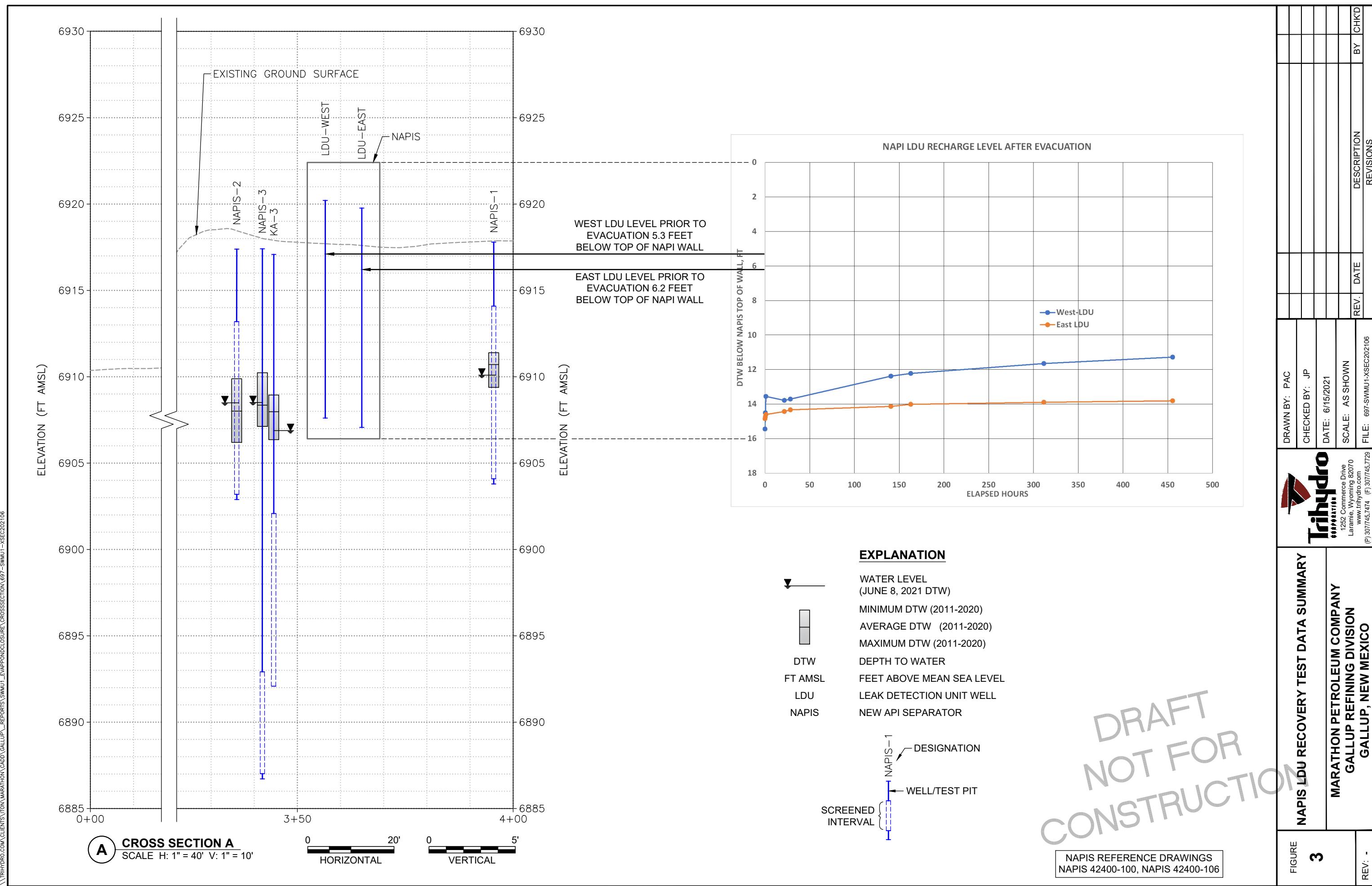
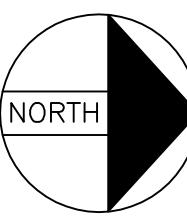


FIGURE	LDU EAST AND WEST RECHARGE/RECOVERY WATER LEVELS	DRAWN BY: PAC
		CHECKED BY: JP
2	MARATHON PETROLEUM COMPANY GALLUP REFINING DIVISION GALLUP, NEW MEXICO	DATE: 6/15/2021
REV: -	SCALE: NONE	SCALE: NONE
	FILE: 697-LDU-E-W-RECHARGEWI-202106	FILE: 697-LDU-E-W-RECHARGEWI-202106
	www.trihydro.com	www.trihydro.com
	(P) 307/745-4744	(P) 307/745-7729
	1252 Commerce Drive Laramie, Wyoming 82070	1252 Commerce Drive Laramie, Wyoming 82070
	Trihydro	Trihydro
	•••••	•••••
		REVISIONS
		BY CHKD



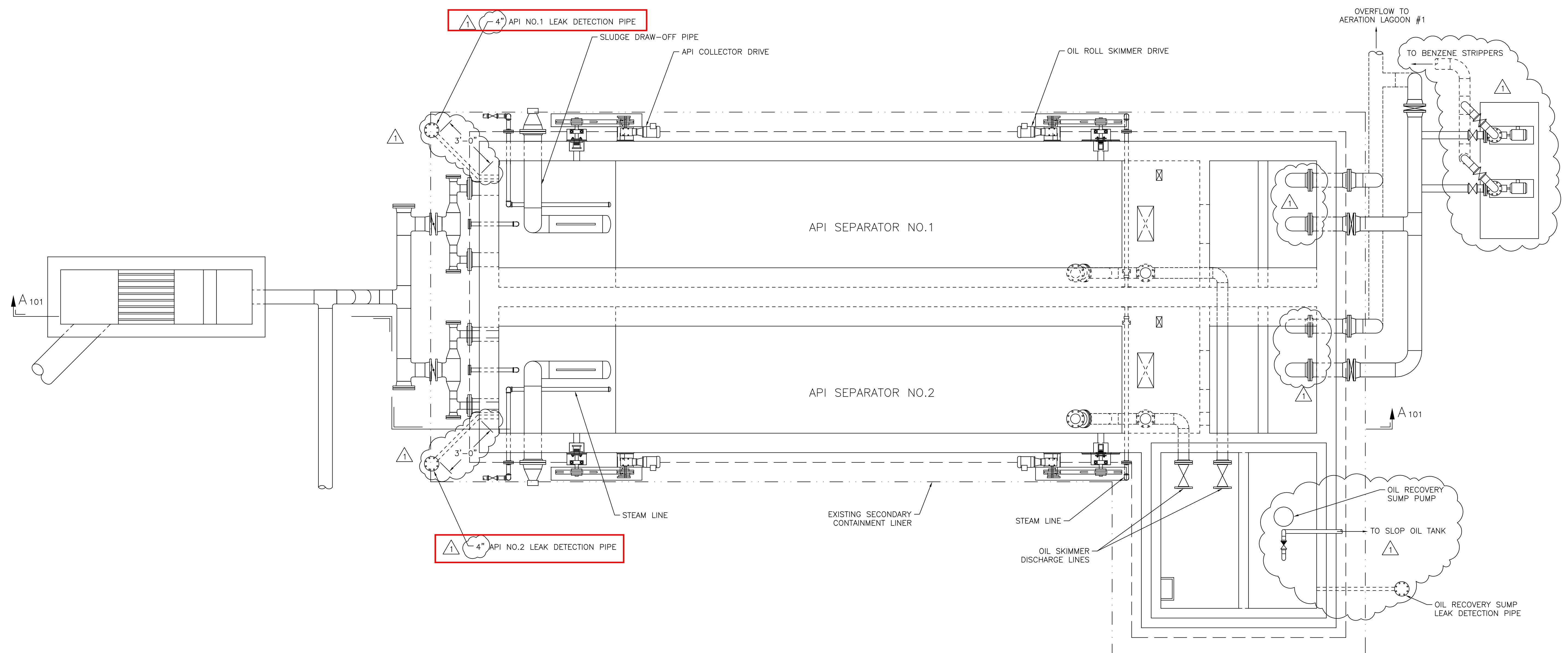
ATTACHMENT 1



NOTES:

- VAPOR COVERS AND INTERNAL EQUIPMENT COMPONENTS
REMOVED FROM VIEW FOR CLARITY.

line added for notations related to
primary and secondary containment.



						<p style="text-align: center;">COMPANY CONFIDENTIAL THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF SIEMENS AND/OR ITS AFFILIATES. THE DESIGN CONCEPTS AND INFORMATION CONTAINED HEREIN ARE PROPRIETARY TO SIEMENS AND ARE SUBMITTED IN CONFIDENCE. THEY ARE NOT TRANSFERABLE AND MUST BE USED ONLY FOR THE PURPOSE FOR WHICH THE DOCUMENT IS EXPRESSLY LOANED. THEY MUST NOT BE DISCLOSED, REPRODUCED, LOANED OR USED IN ANY OTHER MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SIEMENS. IN NO EVENT SHALL THEY BE USED IN ANY MANNER DETRIMENTAL TO THE INTEREST OF SIEMENS. ALL PATENT RIGHTS ARE RESERVED. UPON THE DEMAND OF SIEMENS, THIS DOCUMENT, ALONG WITH ALL COPIES AND EXTRACTS, AND ALL RELATED NOTES AND ANALYSES, MUST BE RETURNED TO SIEMENS OR DESTROYED, AS INSTRUCTED BY SIEMENS. ACCEPTANCE OF THE DELIVERY OF THIS DOCUMENT CONSTITUTES AGREEMENT TO THESE TERMS AND CONDITIONS.</p>	DESIGNER	DATE	TITLE	API SEPARATOR AND OIL RECOVERY SUMP				
							DJS	04/16/07		PLAN VIEW				
							CHECKER	DATE		GIANT INDUSTRIES, INC				
							JLF	04/18/07		CINIZA REFINERY, GALLUP, NM				
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0	ISSUE FOR CONSTRUCTION	05/01/07	DJS	JLF	JLF		MANAGER	DATE		WAUKESHA, WI				
A	ISSUED FOR APPROVAL	04/19/07	DJS	JLF	JLF		JLF	04/18/07		262-547-0141				
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Outline added for notations related to primary and secondary containment.

SUGGESTED INSTALLATION PROCEDURE AND NOTES

1. REMOVE EXISTING API AND OIL SUMP EQUIPMENT WITHIN THE CONCRETE TANKS RECEIVING LINERS.
2. CUT EXISTING EQUIPMENT ANCHOR BOLTS (UNLESS NOTED OTHERWISE) FLUSH WITH CONCRETE SURFACE.
3. REMOVE ALL UNNECESSARY PULTRUSIONS FROM INSIDE TANK. CUT AND REMOVE (IF NECESSARY) EXISTING 8" EFFLUENT AND OVERFLOW PIPES TO ALLOW INSTALLATION OF LINER.
4. INSTALL 2" LEAK DETECTION PIPES IN SLUDGE HOPPER AND CORE DRILL 1" LEAK DETECTION DRAINS AT EFFLUENT WALLS.
5. CORE DRILL DRIVE SHAFT STUFFING BOX OPENINGS FOR COLLECTOR AND OIL ROLL. OPENING TO BE SUFFICIENT FOR 8" SIZE PIPE SLEEVE.
6. COAT INSIDE SURFACES OF TANK WITH POLYURETHENE (CLIENT).
7. CONFIRM FIELD MEASUREMENTS PRIOR TO CONSTRUCTION.
8. INSTALL PIPE COLLAR PLATES AT EXISTING TANK NOZZLES.
9. INSTALL DRIVE SHAFT STUFFING BOX SLEEVES FOR COLLECTOR AND OIL ROLL. GROUT GAP BETWEEN SLEEVE AND CORED HOLE THEN INSTALL SLEEVE COLLAR PLATES.
10. INSTALL SLUDGE HOPPER, COLLECTOR, EFFLUENT CHAMBER AND OIL SUMP FLOOR LINER PLATE.
11. INSTALL SLUDGE HOPPER, COLLECTOR, EFFLUENT CHAMBER AND OIL SUMP WALL LINER PLATE, EXPANDABLE ANCHORS AND CORNER ANGLES. LUBRICATE EXPANDABLE ANCHORS PRIOR TO SEAL WELDING CLOSURE PLATES.
12. INSTALL WEIR PLATE MOUNTING STUDS.

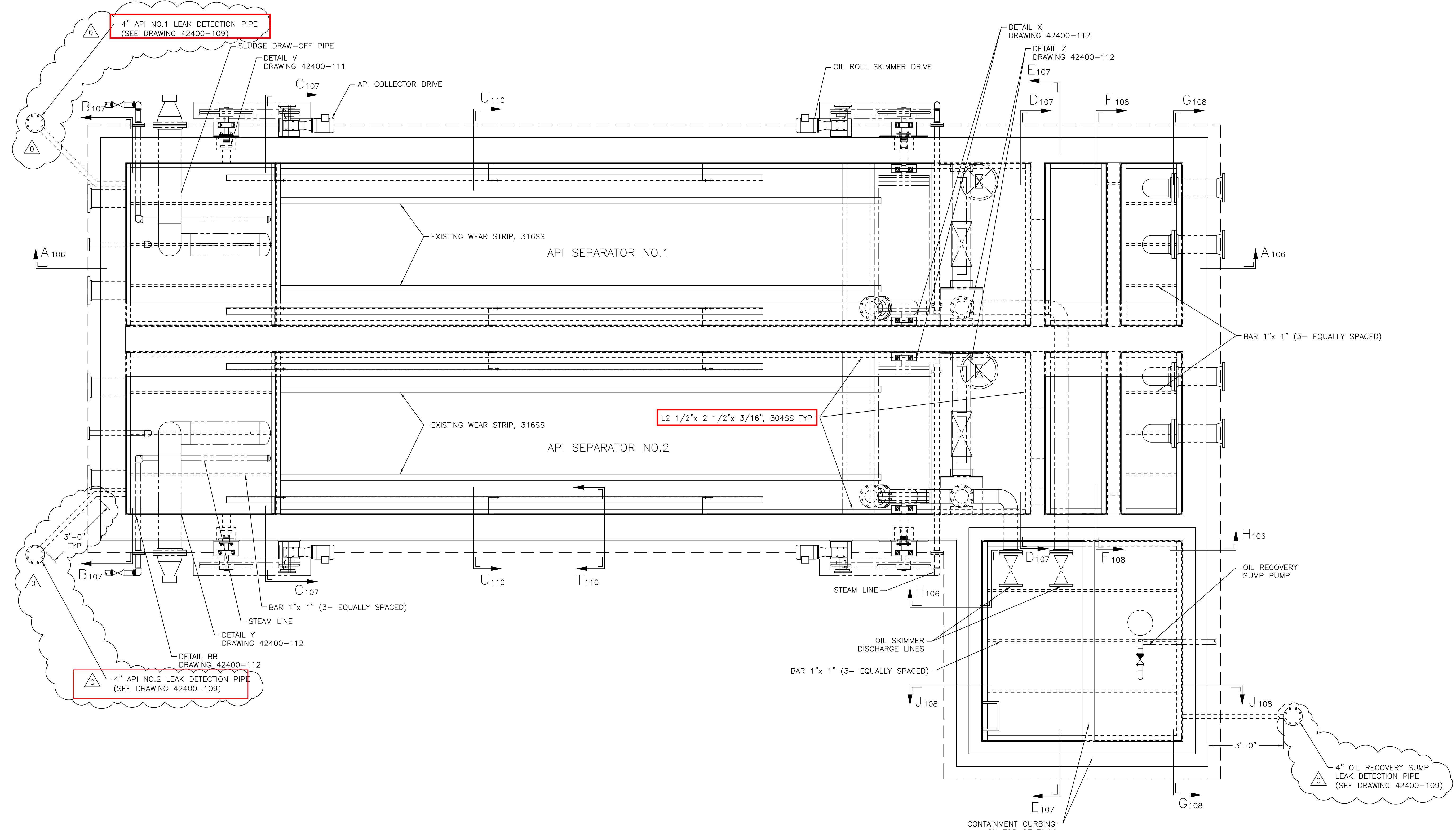
GENERAL NOTES

1. DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS.
2. MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS UNLESS NOTED:
 - SHEETS AND PLATE - STAINLESS STEEL AISI 304
 - ANGLE AND BAR - STAINLESS STEEL AISI 304
 - WELD MATERIAL - COMPOSITION EQUIVALENT TO 304 - ASTM 308 (E309 FOR C.S. TO S.S.)
 - ANCHORS - STUD TYPE (HILTI 3 OR FOAL) 304SS
 - POLYURETHENE CONCRETE COATING SHERWIN WILLIAMS SUFLEX ELASTOMERIC POLYURETHENE (60-100 MILS TOTAL DFT) BY CLIENT
 - JOINT SEALANT - SIKAFLLEX - BY CLIENT
 - LUBRICANT - MOBILITH SHC 100 SYNTHETIC BEARING GREASE
 - EXPANSION SEALANT - VITON CAULK THEMODYN CORP. FLUORODYN OR EQUAL
 - EPOXY CONCRETE PATCH - SIKADUR 43 PATCH PAK OR EQUAL
 - SPACER BOARD - 3/8" x 6x6 COMPRESSIBLE LOW DENSITY STYROFOAM BLOCK TO HOLD GAP DURING INSTALLATION
 - GROUT - FIVE STAR PRODUCTS INC., FIVE STAR® METALLIC NONSHRINK FLUID GROUT
3. ALL WELD CONNECTIONS TO BE IN ACCORDANCE WITH THE LATEST ASME STRUCTURAL WELDING CODE, SECTION IX, PERFORMED BY CERTIFIED WELDERS. (SEE DOCUMENT 42400WP)

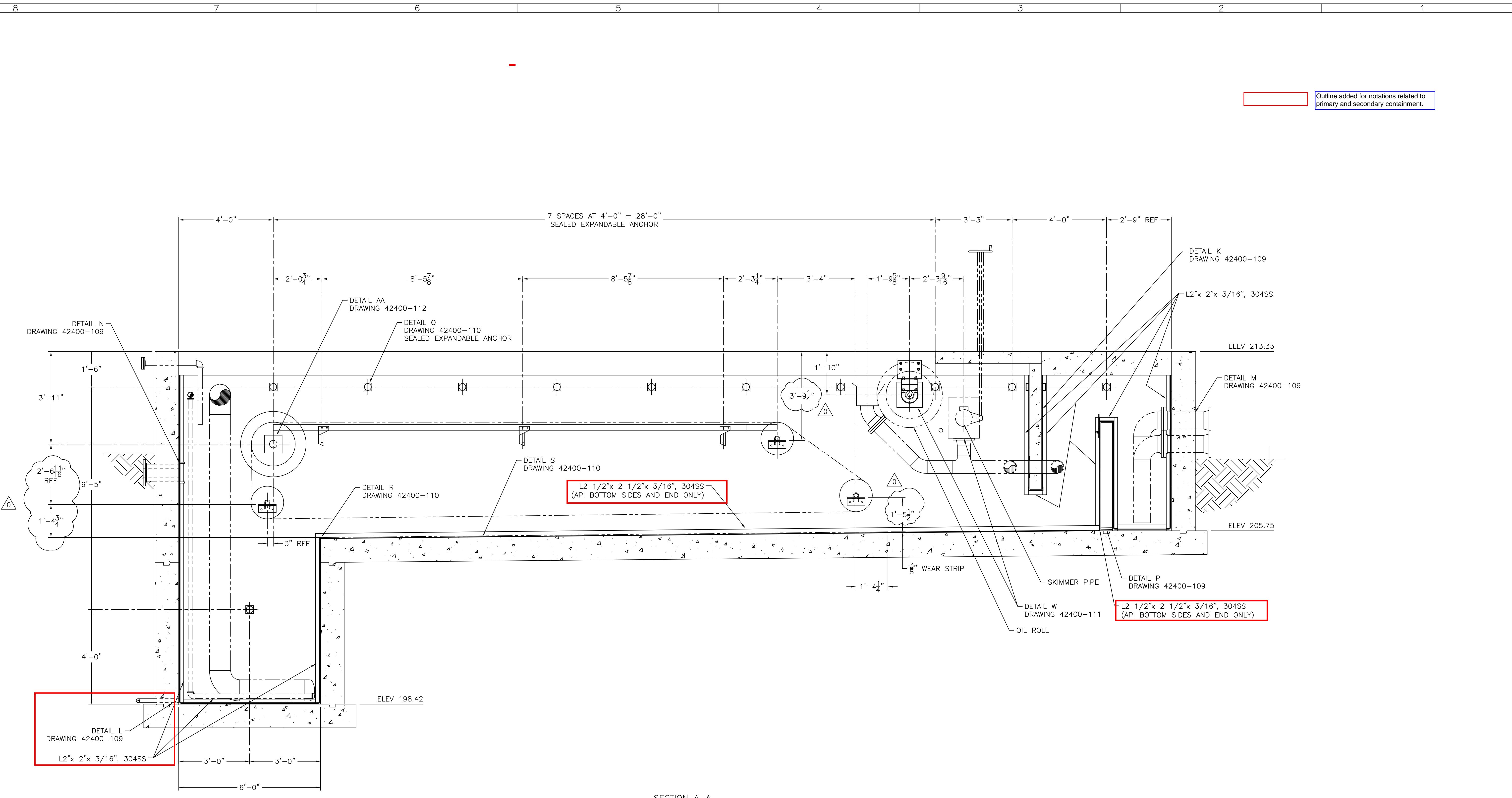
WELDING NOTES

1. PROVIDE FOR PROPER HEAT DISSIPATION USING SEVERAL LIGHT PASSES TO COMPLETE THE WELD.
2. WELD AREA TO BE CLEANED BEFORE AND AFTER WELDING CARBON STEEL FILES AND BRUSHES SHOULD NOT BE USED.
3. ALL WELDS TO BE 1/8" SEAL WELDS WHERE REQUIRED FOR PROPER CONTAINMENT, UNLESS OTHERWISE NOTED.
4. CARBON TO STAINLESS WELDS WILL INCLUDE BUTTERING THE CARBON SURFACE WITH A LAYER OF TYPE E309 WELD MATERIAL. JOINT IS TO BE COMPLETED WITH TYPE E308 WELD MATERIAL.

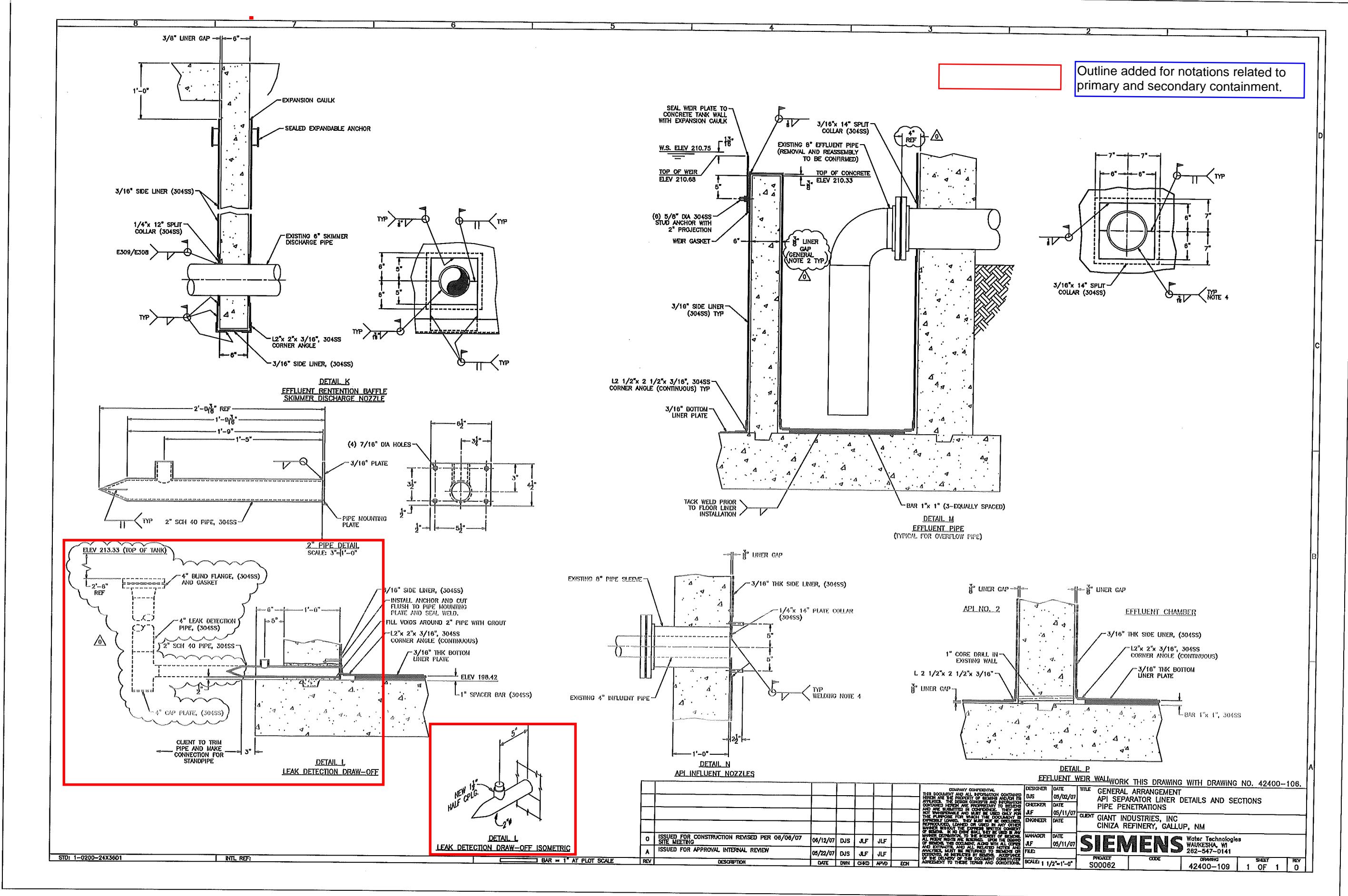
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DESIGNER	DATE	GENERAL ARRANGEMENT SPECIFICATIONS FOR API SEPARATOR LINER											
CHECKER	DATE	GIANT INDUSTRIES, INC CINZA REFINERY, GALLUP, NM											
ENGINEER	DATE	SIEMENS Water Technologies WAUKESHA, WI 262-547-0141											
MANAGER	DATE	FILE: S00062 PROJECT: S00062 CODE: 42400-104 DRAWING: 1 OF 1 SHEET: 0											
O	ISSUED FOR CONSTRUCTION REVISED PER 06/06/07 SITE MEETING	06/12/07	DJS	JLF	JLF	THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF SIEMENS AND/OR ITS AFFILIATES. THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN ARE PROPRIETARY TO SIEMENS AND ARE SUBMITTED IN CONFIDENCE. THEY ARE NOT TO BE COPIED, REPRODUCED, LOANED OR USED IN ANY OTHER MANNER WITHOUT THE EXPRESS WRITTEN CONSENT OF SIEMENS. THIS DOCUMENT AND ALL INFORMATION CONTAINED HEREIN ARE NOT TO BE COPIED, REPRODUCED, LOANED OR USED IN ANY OTHER MANNER DETERMINED TO THE INTEREST OF SIEMENS. THIS DOCUMENT, ALONG WITH ALL COPIES AND EXTRACTS, AND ALL RELATED NOTES AND ANALYSIS, ARE TO BE RETURNED TO SIEMENS OR DESTROYED, AS INSTRUCTED BY SIEMENS. ACCEPTANCE OF THE DELIVERY OF THIS DOCUMENT CONSTITUTES AGREEMENT TO THESE TERMS AND CONDITIONS.							
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STD: 1-0200-24X36D1	INTL REF:	BAR = 1" AT PLOT SCALE	REV	DESCRIPTION	DATE	DWN	CHKD	APVD	ECN	SCALE: NONE			



GENERAL ARRANGEMENT API SEPARATOR AND OIL RECOVERY SUMP PLAN VIEW LINER INSTALLATION									
SIEMENS Water Technologies WAUKESHA, WI 262-547-0141									
DESIGNER	DATE	TITLE							
DJS	05/14/07	API SEPARATOR AND OIL RECOVERY SUMP PLAN VIEW LINER INSTALLATION							
CHECKER	DATE								
JLF	05/15/07								
ENGINEER	DATE								
MANAGER	DATE								
JLF	05/15/07								
FILE:									
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A	ISSUED FOR APPROVAL AND INTERNAL REVIEW	05/22/07	DJS	JLF	JLF	DATE	05/15/07	CLIENT	Giant Industries, Inc Ciniza Refinery, Gallup, NM
			DESCRIPTION	DATE	DWN	CHKD	APVD	ECN	



COMPANY CONFIDENTIAL										DESIGNER	DATE	TITLE
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										JLF	05/15/07	API SEPARATOR AND OIL RECOVERY SUMP
												ELEVATION VIEW LINER INSTALLATION
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A	ISSUED FOR APPROVAL AND INTERNAL REVIEW	05/22/07	DJS	JLF	JLF					JLF	05/15/07	Giant Industries, Inc.
										ENGINEER	DATE	Ciniza Refinery, Gallup, NM
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												WAUKESHA, WI
												262-547-0141
										FILE:		
										PROJECT	CODE	DRAWING
										S00062		42400-106
										1 OF	1	REV
STD: 1-0200-24X36D1	INTL REF:	BAR = 1" AT PLOT SCALE	REV	DESCRIPTION	DATE	DWN	CHKD	APVD	ECN	SCALE: 1/2"=1'0"		



ATTACHMENT 2

ATTACHMENT 2. PHOTO LOG – NAPIS INVESTIGATION



Photo 1. API – East Bay, South End



Photo 2. API – East Bay, Middle Section



Photo 3. API – East Bay, North End, Hole Located Above Left Pipe



Photo 4. API – East Bay, North End, Hole Above Pipe

ATTACHMENT 2. PHOTO LOG – NAPIS INVESTIGATION



Photo 5. API – East Bay

ATTACHMENT 3

8.8 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

BTEX and MTBE Analytical Result Summary

			PARAMETERS				
STANDARDS			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.005	1	0.7	0.62	0.1
40 CFR 141.61 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (Rev 2. JUN 2019)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (NOV 2019)			0.0046	1.1	0.0015	0.19	0.14
WELL ID	DATE SAMPLED	METHOD					
NAPIS-1	06/02/17	8260B	0.000067	<0.001	<0.001	<0.0015	0.0031
	02/21/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.0013
	11/14/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00087
	09/01/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.0018
	06/07/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.002
	03/01/16	8260B	<0.001	<0.001	<0.001	9.2	0.0003
	10/28/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	08/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/02/15	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/10/15	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/11/14	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	09/11/14	8260B	0.0014	<0.001	<0.001	<0.0015	<0.001
	06/05/14	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/10/14	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/12/13	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	09/03/13	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/12/13	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/18/13	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/28/12	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	08/21/12	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/12/12	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/20/12	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	12/14/11	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	09/27/11	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	06/15/11	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	03/02/11	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/02/10	8260	<0.001	<0.001	<0.001	<0.003	<0.0015
	09/15/10	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	06/08/10	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/08/10	8021B	<0.001	<0.001	<0.001	<0.002	NA

8.8 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

BTEX and MTBE Analytical Result Summary

			PARAMETERS				
STANDARDS			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.005	1	0.7	0.62	0.1
40 CFR 141.61 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (Rev 2. JUN 2019)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (NOV 2019)			0.0046	1.1	0.0015	0.19	0.14
WELL ID	DATE SAMPLED	METHOD					
NAPIS-2	10/21/19	8260B	0.210	<0.001	0.024	<0.0015	0.1
	08/22/19	8260B	0.220	0.00045	0.044	0.00085	0.11
	05/28/19	8260B	0.270	<0.001	0.045	<0.0015	0.098
	04/09/19	260B SHORT LIS	0.340	<0.01	0.024	0.001	0.097
	04/30/18	8260B	0.032	0.00230	0.035	0.00061	0.099
	02/09/18	8260B	0.027	0.00069	0.033	0.0016	0.13
	12/04/17	8260B	0.021	0.00031	0.038	0.00069	0.16
	09/05/17	8260B	0.030	0.00030	0.037	0.00078	0.14
	06/01/17	8260B	0.035	0.00025	0.016	0.00071	0.14
	02/21/17	8260B	0.024	0.00014	0.0031	0.00053	0.18
	11/14/16	8260B	0.0041	0.0001	0.0014	<0.0015	0.16
	09/01/16	8260B	0.0050	<0.001	0.0015	<0.0015	0.18
	06/07/16	8260B	0.0045	0.0001	0.0051	<0.0015	0.14
	03/01/16	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	10/28/15	8260B	0.0091	<0.001	0.0021	<0.0015	0.23
	08/11/15	8260B	0.012	<0.001	0.0028	<0.0015	0.2
	06/02/15	8021B	0.016	<0.001	0.0073	<0.002	0.2
	03/10/15	8021B	0.032	<0.001	0.0120	0.0027	0.22
	11/11/14	8021B	0.016	<0.001	0.0052	<0.002	0.34
	09/11/14	8260B	0.027	<0.001	0.007	<0.0015	0.29
	06/05/14	8021B	0.086	0.0021	0.028	0.0037	0.2
	03/10/14	8021B	0.067	<0.002	0.028	<0.004	0.21
	11/12/13	8021B	0.001	<0.001	0.0083	<0.002	0.25
	09/03/13	8260B	0.018	<0.001	0.013	0.0016	0.24
	06/12/13	8021B	0.013	<0.001	0.047	<0.002	0.3
	03/18/13	8021B	0.07	<0.001	0.056	0.0022	0.38
	11/28/12	8021B	0.016	<0.002	0.003	<0.004	0.36
	08/21/12	8260B	0.01	<0.005	<0.005	<0.0075	0.16
	06/12/12	8021B	0.018	<0.01	0.012	<0.02	0.34
	03/20/12	8021B	0.019	<0.01	0.011	<0.02	0.37
	12/14/11	8021B	0.022	<0.005	0.0089	<0.01	0.33
	09/27/11	8021B	0.035	<0.005	<0.005	<0.01	0.33
	06/15/11	8260B	0.027	<0.005	0.018	<0.0075	0.28
	03/02/11	8021B	0.04	<0.005	0.014	<0.01	0.34
	11/02/10	8260	0.015	<0.005	<0.005	<0.0015	0.27
	09/15/10	8260B	0.066	<0.005	0.0083	<0.015	0.23
	06/10/10	8021B	0.14	<0.005	0.0096	<0.001	0.23
	03/08/10	8260B	0.083	0.0014	0.016	0.0021	0.25

8.8 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

BTEX and MTBE Analytical Result Summary

			PARAMETERS				
STANDARDS			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.005	1	0.7	0.62	0.1
40 CFR 141.61 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (Rev 2. JUN 2019)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (NOV 2019)			0.0046	1.1	0.0015	0.19	0.14
WELL ID	DATE SAMPLED	METHOD					
NAPIS-3	10/21/19	8260B	<0.001	<0.001	<0.001	<0.0015	0.028
	08/22/19	8260B	0.00054	<0.001	<0.001	<0.0015	0.03
	05/28/19	8260B	<0.001	<0.001	<0.001	<0.0015	0.031
	04/09/19	8260B	<0.001	<0.001	0.00076	<0.0015	0.04
	04/30/18	8260B	0.29	0.00660	0.0083	0.013	0.032
	02/09/18	8260B	0.00016	<0.001	0.000098	<0.0015	0.033
	12/04/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.042
	09/05/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.018
	06/02/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.040
	02/21/17	8260B	<0.001	<0.001	<0.001	<0.0015	0.016
	11/14/16	8260B	<0.001	0.00021	<0.001	<0.0015	0.01500
	09/01/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00084
	06/07/16	8260B	<0.001	<0.001	<0.001	<0.0015	0.00044
	03/01/16	8260B	0.013	0.00023	0.0053	<0.0015	0.16
	10/28/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	08/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/02/15	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/10/15	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/13/14	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	09/11/14	8260B	0.0038	<0.001	0.0019	<0.0015	0.011
	06/05/14	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/10/14	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/12/13	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	09/03/13	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/12/13	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/18/13	8021B	<0.002	<0.002	<0.002	<0.004	<0.005
	11/28/12	8021B	<0.002	<0.002	<0.002	<0.004	<0.005
	10/2/2012 ¹	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	06/12/12	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/20/12	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	12/14/11	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	09/27/11	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	06/15/11	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	03/02/11	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	11/02/10	8260	<0.001	<0.001	<0.001	<0.0015	<0.0015
	09/15/10	8021B	0.001	<0.001	<0.001	<0.002	<0.0025
	06/10/10	8021B	0.2	<0.001	0.012	<0.002	0.08
	03/08/10	8021B	0.072	<0.001	0.001	<0.002	NA

8.8 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

BTEX and MTBE Analytical Result Summary

			PARAMETERS				
STANDARDS			Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.005	1	0.7	0.62	0.1
40 CFR 141.61 MCL			0.005	1.0	0.7	10	NE
NMED Tap Water (Rev 2. JUN 2019)			0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (NOV 2019)			0.0046	1.1	0.0015	0.19	0.14
WELL ID	DATE SAMPLED	METHOD					
KA-3	10/21/19	8260B	0.057	<0.004	0.0062	<0.0015	0.056
	08/22/19	8260B	0.38	<0.001	0.048	0.00062	0.068
	05/28/19	8260B	0.2	<0.001	0.015	0.00057	0.061
	04/09/19	260B SHORT LIS	0.21	<0.001	0.028	0.0012	0.061
	04/30/18	8260B	0.5900	0.51	0.054	0.058	0.032
	02/09/18	8260B	0.0033	<0.001	0.002	<0.0015	0.029
	12/04/17	8260B	0.0042	<0.001	0.002	<0.0015	0.040
	09/05/17	8260B	0.0025	<0.001	0.0011	<0.0015	0.041
	06/01/17	8260B	0.00048	<0.001	0.00027	<0.0015	0.046
	02/21/17	8260B	0.017	<0.001	0.0077	<0.0015	0.046
	11/14/16	8260B	0.0044	<0.001	0.0013	<0.0015	0.037
	09/01/16	8260B	0.0071	<0.001	0.0032	<0.0015	0.045
	06/07/16	8260B	0.0060	<0.001	0.0015	<0.0015	0.037
	03/03/16	8260B	0.0054	<0.001	0.0027	<0.0015	0.015
	10/28/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.011
	08/11/15	8260B	<0.001	<0.001	<0.001	<0.0015	0.011
	06/02/15	8021B	<0.001	<0.001	<0.001	<0.002	0.012
	03/10/15	8021B	<0.001	<0.001	<0.001	<0.002	0.0088
	11/11/14	8021B	<0.001	<0.001	<0.001	<0.002	0.0130
	09/11/14	8260B	<0.001	<0.001	<0.001	<0.0015	<0.001
	06/05/14	8021B	<0.001	<0.001	<0.001	<0.002	0.0056
	03/10/14	8021B	<0.001	<0.001	<0.001	<0.002	0.0039
	11/12/13	8021B	0.0024	<0.001	0.0018	<0.002	0.0065
	09/03/13	8260B	0.0034	<0.001	0.0014	<0.0015	0.2000
	06/12/13	8021B	0.009	<0.001	0.0083	<0.002	0.031
	03/18/13	8021B	0.011	<0.001	0.0110	<0.002	0.017
	11/28/12	8021B	<0.002	<0.002	<0.002	<0.004	<0.005
	08/21/12	8260B	<0.001	<0.001	<0.001	<0.0015	0.023
	06/12/12	8021B	0.013	<0.001	0.0045	<0.002	0.028
	03/20/12	8021B	0.015	<0.002	0.0042	<0.004	0.035
	12/14/11	8021B	0.024	<0.001	0.0045	<0.002	0.057
	09/27/11	8021B	0.064	<0.001	0.011	<0.002	0.099
	06/15/11	8260B	<0.001	<0.001	<0.001	<0.0015	0.077
	03/02/11	8021B	<0.005	<0.005	<0.005	<0.01	0.088
	11/02/10	8260	0.23	<0.01	0.014	<0.03	0.1
	09/15/10	8260B	0.52	<0.01	0.031	<0.03	0.11
	06/10/10	8021B	<0.001	<0.001	<0.001	<0.002	<0.0025
	03/08/10	8021B	<0.01	<0.01	<0.01	<0.01	NA

8.8 NAPIS-1, NAPIS-2, NAPIS-3, KA-3**BTEX and MTBE Analytical Result Summary**

STANDARDS		PARAMETERS				
		Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)		0.005	1	0.7	0.62	0.1
40 CFR 141.61 MCL		0.005	1.0	0.7	10	NE
NMED Tap Water (Rev 2. JUN 2019)		0.00455	1.09	0.0149	0.193	0.143
EPA RSL for Tap Water (NOV 2019)		0.0046	1.1	0.0015	0.19	0.14
WELL ID	DATE SAMPLED	METHOD				

DEFINITIONS

NA = Not analyzed; NE = Not established

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.61 Maximum Contaminant Levels for Organic Contaminants

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

EPA Regional Screening Level (RSL) Summary Table

NOTES

- 1) Was not sampled in September due to low recharge rate.

8.8.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Total Metals Analytical Result Summary

STANDARDS			PARAMETERS										
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.01	2	0.05	1.0	1.0	0.015	0.2	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.1	1.3	NE	0.015	NE	0.05	0.002	0.03	NE
NMED Tap Water (Rev 2. JUN 2019)			0.000855	3.28	0.0057	0.7898	13.8	NE	2.02	0.0987	0.000626	0.0592	5.96
EPA RSL for Tap Water (NOV 2019)			0.000052	3.8	22	0.8	14	0.015	0.43	0.1	0.00063	0.004	6
WELL ID	DATE SAMPLED	METHOD											
NAPIS-1	06/01/17	200.7/200.8	0.0018	0.15	<0.006	<0.006	<0.020	0.00051	0.14	0.0045	<0.0002	0.015	0.019
	02/21/17	200.7/200.8	0.0042	0.13	<0.006	<0.006	0.14	0.00028	0.26	0.0085	<0.0002	NA	0.018
	11/14/16	200.7/200.8	0.0036	0.1300	<0.006	<0.006	0.550	0.0008	0.250	0.0072	0.0001	0.034	0.0053
	09/01/16	200.7/200.8	0.0041	0.1400	<0.006	<0.006	0.290	0.0005	0.250	<0.02	NA	0.019	0.0028
	06/07/16	200.7/200.8	<0.01	0.1600	<0.006	<0.006	0.820	0.0010	0.260	0.0078	0.0001	0.015	0.0048
	10/28/15	200.7/200.8	<0.005	0.1400	<0.006	<0.006	0.590	0.0008	0.130	0.0054	<0.0002	0.013	<0.01
	08/11/15	200.7/200.8	<0.01	0.1100	<0.006	<0.006	0.720	0.0011	0.099	<0.01	<0.0002	0.025	0.0100
	06/02/15	200.7/200.8	<0.01	0.1500	<0.006	<0.006	0.600	<0.005	0.250	<0.01	<0.0002	0.014	<0.01
	03/10/15	200.7/200.8	<0.01	0.1300	<0.006	<0.006	0.460	<0.001	0.200	<0.01	<0.0002	0.013	<0.01
	11/11/14	200.7/200.8	<0.01	0.1300	<0.006	<0.006	0.790	0.0010	0.240	<0.01	<0.0002	0.012	0.0100
	09/11/14	200.7/200.8	<0.01	0.1300	<0.006	<0.006	0.240	<0.01	0.120	0.0120	<0.0002	0.012	<0.01
	03/05/14	200.7/200.8	<0.005	0.1500	<0.006	<0.006	1.200	<0.005	0.120	0.0100	<0.0002	0.014	0.0120
	03/10/14	200.7/200.8	0.0018	0.1400	<0.006	<0.006	0.280	<0.001	0.095	0.0055	<0.0002	0.013	0.0120
	11/12/13	200.7/200.8	0.0034	0.1900	<0.006	<0.006	0.360	<0.001	0.170	0.0100	<0.0002	0.012	0.0110
	09/03/13	200.7/200.8	0.0026	0.1700	<0.006	<0.006	0.570	<0.001	0.089	0.0073	<0.0002	0.010	<0.01
	06/12/13	200.7/200.8	0.0027	0.1300	<0.006	<0.006	0.250	NL	0.068	0.0076	<0.0002	0.011	<0.01
	03/18/13	200.7/200.8	<0.0025	0.1300	<0.006	<0.006	1.400	<0.005	0.140	0.0039	<0.0002	0.017	0.0110
	11/28/12	200.7/200.8	<0.0025	0.1200	<0.006	<0.006	1.100	<0.005	0.099	0.0027	<0.001	0.030	0.0130
	08/21/12	200.7/200.8	<0.0025	0.1300	<0.006	<0.006	0.066	<0.005	0.018	0.0043	<0.0002	0.009	<0.01
	06/02/12	200.7/200.8	0.0031	0.2700	0.0068	<0.06	7.500	<0.005	0.360	0.0052	<0.001	0.032	0.0370
	03/20/12	200.7/200.8	<0.0025	0.1300	<0.006	<0.006	0.990	<0.005	0.039	0.0053	<0.0002	0.012	<0.01
	12/14/11	200.7/200.8	<0.0025	0.1900	<0.006	<0.006	2.900	<0.005	0.120	0.0033	<0.0002	0.019	0.0170
	09/27/11	200.7/200.8	<0.0025	0.1300	<0.006	<0.006	0.590	<0.005	0.092	0.0067	<0.0002	0.046	<0.01
	6/15/2011	200.7/200.8	0.0040	0.1900	<0.006	<0.006	2.200	<0.005	0.058	0.0100	<0.0002	0.013	0.0120
	3/2/2011	200.7/200.8	<0.0025	0.1700	<0.006	<0.006	1.000	<0.005	0.035	<0.05	NA	0.021	<0.01
	11/02/10	6010B	<0.02	0.2600	0.0062	<0.006	6.400	<0.005	0.160	<0.05	<0.0002	0.045	0.0270
	09/15/10	6010B	<0.02	0.1900	<0.006	<0.006	0.560	<0.005	0.044	<0.05	<0.0002	0.018	<0.02
	06/08/10	6010B	<0.02	0.1800	<0.006	NA	NA	<0.005	NA	<0.05	<0.0002	NA	NA
	03/08/10	6020A	<0.001	0.1330	0.0011	0.0026	0.548	<0.001	0.015	<0.001	<0.0001	0.273	0.0049

8.8.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Total Metals Analytical Result Summary

STANDARDS			PARAMETERS										
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.01	2	0.05	1.0	1.0	0.015	0.2	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.1	1.3	NE	0.015	NE	0.05	0.002	0.03	NE
NMED Tap Water (Rev 2. JUN 2019)			0.000855	3.28	0.0057	0.7898	13.8	NE	2.02	0.0987	0.000626	0.0592	5.96
EPA RSL for Tap Water (NOV 2019)			0.000052	3.8	22	0.8	14	0.015	0.43	0.1	0.00063	0.004	6
WELL ID	DATE SAMPLED	METHOD											
NAPIS-2	10/21/19	200.7/200.8	0.0042	2.0	<0.006	<0.006	2.8	0.0011	0.92	0.0006	0.0001	NA	0.0084
	08/22/19	200.7/200.8	0.0044	1.9	<0.006	0.0042	3.2	0.0021	0.89	<0.001	0.0001	0.0002	0.0064
	05/28/19	200.7/200.8	0.0043	1.7	0.0015	<0.006	3.2	0.0020	0.75	<0.001	<0.0002	0.0002	0.0120
	04/09/19	200.7/200.8	0.0046	2.1	0.0017	0.0042	4.0	0.0033	0.65	0.0005	NA	0.000096	0.0190
	04/30/18	200.7/200.8	0.0047	2.2	<0.006	<0.006	3.7	0.0012	0.9	<0.001	<0.0002	0.0003	0.0064
	02/09/18	200.7/200.8	0.0056	2.2	<0.006	<0.006	4.9	0.0015	0.99	0.0044	0.000073	0.0004	0.0066
	12/04/17	200.7/200.8	0.0055	1.9	<0.006	<0.006	2.2	<0.005	1.0	<0.01	<0.0002	<0.005	<0.01
	09/05/17	200.7/200.8	0.0068	2.2	0.0029	0.0051	5.7	0.0044	1.1	0.0056	<0.0002	0.00056	0.017
	06/01/17	200.7/200.8	0.0050	2.1	0.0032	0.0079	4.8	0.0029	0.98	0.0024	<0.0002	0.00066	0.013
	02/21/17	200.7/200.8	0.0080	1.8	0.0062	0.0043	4.0	0.0038	0.96	0.0067	<0.0002	NA	0.016
	11/14/16	200.7/200.8	0.0084	1.9	0.0069	0.0071	5.5	0.0070	1.3	0.0050	0.0001	0.0009	0.0300
	09/01/16	200.7/200.8	0.0087	2.0	0.0110	0.0100	7.8	0.0081	1.4	0.0110	NL	0.0013	0.057
	06/07/16	200.7/200.8	0.0082	1.6	0.0034	<0.006	5.6	0.0053	1.2	0.0059	0.0001	0.0015	0.022
	10/28/15	200.7/200.8	0.0080	1.6	<0.006	<0.006	3.3	0.0018	1.2	<0.01	<0.0002	<0.0005	0.011
	08/11/15	200.7/200.8	0.0080	1.6	<0.006	0.0099	3.3	0.0023	1.2	<0.005	<0.0002	<0.0005	0.016
	06/02/15	200.7/200.8	<0.01	1.6	<0.006	<0.006	2.9	<0.005	1.2	<0.01	<0.0002	<0.005	<0.01
	03/10/15	200.7/200.8	<0.01	1.9	<0.006	<0.006	3.0	0.0013	1.1	<0.01	<0.0002	<0.001	<0.01
	11/11/14	200.7/200.8	<0.01	1.7	<0.006	<0.006	2.9	<0.001	1.4	<0.01	<0.0002	<0.001	0.013
	09/11/14	200.7/200.8	0.0100	2.1	<0.006	0.0120	3.5	0.0030	1.3	0.0110	<0.0002	<0.001	0.047
	06/05/14	200.7/200.8	<0.005	2.0	<0.006	0.0097	3.9	<0.005	1.3	0.0095	<0.0002	<0.005	0.013
	03/10/14	200.7/200.8	0.0060	1.5	<0.006	<0.006	2.9	<0.001	1.4	0.0071	<0.0002	<0.001	<0.01
	11/12/13	200.7/200.8	0.0081	1.4	<0.006	0.0097	3.2	0.0013	1.4	0.0077	<0.0002	<0.001	0.018
	09/03/13	200.7/200.8	0.0063	2.0	<0.006	<0.006	3.9	0.0014	1.4	0.0045	<0.0002	<0.001	0.012
	09/03/13	200.7/200.8	0.0063	2.0	<0.006	<0.006	3.9	0.0014	1.4	0.0045	<0.0002	<0.001	0.012
	06/12/13	200.7/200.8	0.0070	2.0	<0.006	<0.006	3.2	NA	1.5	0.0051	<0.0002	<0.001	<0.01
	03/18/13	200.7/200.8	0.0073	1.6	<0.006	<0.006	2.9	<0.005	1.3	<0.0025	<0.0002	<0.0025	0.015
	11/28/12	200.7/200.8	0.0069	1.7	<0.006	<0.006	3.3	0.0052	1.6	<0.0025	<0.0002	<0.0025	<0.01
	08/21/12	200.7/200.8	0.0097	1.7	<0.006	<0.006	3.1	<0.005	1.7	0.0031	<0.0002	<0.0025	<0.01
	06/12/12	200.7/200.8	0.0100	1.9	<0.006	<0.06	3.8	<0.005	1.9	0.0035	<0.001	<0.0025	<0.01
	03/20/12	200.7/200.8	0.0110	2.1	<0.006	0.0071	5.0	<0.005	1.6	0.0036	<0.0002	<0.0025	0.015
	12/14/11	200.7/200.8	0.0099	1.7	<0.006	<0.006	4.1	<0.005	1.4	<0.0025	<0.0002	<0.0025	0.011
	09/27/11	200.7/200.8	0.0120	1.7	<0.006	<0.006	4.2	<0.005	1.3	0.0034	<0.0002	<0.0025	0.016
	06/15/11	200.7/200.8	0.0120	2.1	<0.006	<0.006	5.4	<0.005	1.5	0.0063	<0.0002	<0.0025	<0.01
	03/02/11	200.7/200.8	0.0110	2.4	<0.006	0.0075	5.4	<0.005	1.3	<0.05	NA	<0.0025	<0.01
	11/02/10	6010B	<0.02	1.2	<0.006	<0.006	4.2	<0.005	1.2	<0.05	<0.0002	NA	<0.02
	09/15/10	6010B	<0.02	1.4	<0.006	<0.006	4.3	<0.005	1.1	<0.05	<0.0002	<0.001	<0.02
	06/10/10	6010B	<0.02	1.7	<0.006	NA	NA	<0.005	NA	<0.05	<0.0002	NA	NA
	03/08/10	6020A	0.0046	2.1									

8.8.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Total Metals Analytical Result Summary

STANDARDS			PARAMETERS										
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.01	2	0.05	1.0	1.0	0.015	0.2	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.1	1.3	NE	0.015	NE	0.05	0.002	0.03	NE
NMED Tap Water (Rev 2. JUN 2019)			0.000855	3.28	0.0057	0.7898	13.8	NE	2.02	0.0987	0.000626	0.0592	5.96
EPA RSL for Tap Water (NOV 2019)			0.000052	3.8	22	0.8	14	0.015	0.43	0.1	0.00063	0.004	6
WELL ID	DATE SAMPLED	METHOD											
NAPIS-3	10/21/19	200.7/200.8	0.0020	0.140	0.004	0.0080	1.3	0.0016	0.12	0.0060	0.000073	NA	0.0360
	08/22/19	200.7/200.8	0.0021	0.00021	0.0073	0.0093	3.3	0.0042	0.21	0.0037	0.00015	0.041	0.0730
	05/28/19	200.7/200.8	0.0026	0.270	0.012	<0.006	4.4	0.0052	0.23	0.0027	<0.0002	0.037	0.0870
	04/09/19	200.7/200.8	0.0013	0.120	<0.006	0.0047	0.190	0.00045	0.21	0.0045	NA	0.023	0.0098
	04/30/18	200.7/200.8	0.0012	0.090	<0.006	<0.006	0.074	<0.0005	0.15	<0.001	<0.0002	0.023	0.0053
	02/09/18	200.7/200.8	<0.005	0.095	<0.006	<0.006	0.046	0.0004	0.11	0.0054	0.0001	0.024	<0.05
	12/04/17	200.7/200.8	<0.010	0.099	<0.006	0.0054	0.040	<0.005	0.13	<0.01	<0.0002	0.025	<0.010
	09/05/17	200.7/200.8	0.0062	0.21	0.0085	0.0084	4.3	0.0050	0.19	0.012	<0.0002	0.041	0.064
NAPIS-3	06/02/17	200.7/200.8	<0.0050	0.093	<0.006	0.0041	<0.020	0.00043	0.10	<0.0050	<0.0002	0.030	0.0049
	02/21/17	200.7/200.8	0.0052	0.089	0.0015	<0.006	0.23	0.0140	0.10	0.0088	<0.0002	NA	0.027
	11/14/16	200.7/200.8	0.0110	3.0	0.078	0.1100	29.0	0.0790	2.9000	0.0120	0.0008	0.0410	0.5600
	09/01/16	200.7/200.8	0.0048	1.0	0.025	0.0300	11.0	0.0250	0.9600	0.0086	NA	0.0290	0.1500
	06/07/16	200.7/200.8	<0.05	0.3	0.019	0.0110	6.8	0.0110	0.3300	0.0170	0.0001	0.0390	0.2000
	10/28/15	200.7/200.8	<0.01	0.1	<0.006	<0.006	1.6	0.0019	0.093	0.018	<0.0002	0.039	0.016
	08/11/15	200.7/200.8	<0.01	0.1	0.010	<0.006	2.2	0.0035	0.081	0.019	<0.0002	0.038	0.070
	06/03/15	200.7/200.8	<0.01	0.1	0.007	0.0075	1.4	<0.005	0.080	<0.02	<0.0002	0.038	0.028
	03/10/15	200.7/200.8	<0.02	0.1	<0.006	<0.006	1.1	0.0015	0.260	<0.05	<0.0002	0.042	0.018
	11/13/14	200.7/200.8	<0.05	0.1	0.010	<0.006	2.1	0.0034	0.070	<0.05	<0.0002	0.039	0.063
	09/11/14	200.7/200.8	<0.01	0.2	<0.006	<0.006	0.1	<0.001	0.550	<0.01	<0.0002	0.019	<0.01
	06/05/14	200.7/200.8	0.0076	0.2	0.016	<0.006	5.8	0.0073	0.160	0.032	<0.0002	0.032	0.140
	03/10/14	200.7/200.8	<0.01	0.2	0.013	0.0073	4.3	0.0053	0.120	0.027	<0.0002	0.036	0.091
	11/12/13	200.7/200.8	0.0097	0.7	0.029	0.0210	13.0	0.0190	0.700	0.030	<0.0002	0.038	0.240
	09/03/13	200.7/200.8	0.0052	0.2	0.009	0.0061	3.4	0.0039	0.160	0.019	<0.0002	0.038	0.043
	06/12/13	200.7/200.8	0.0064	0.9	0.036	0.0300	15.0	NL	0.570	0.016	<0.0002	0.039	0.260
	03/18/13	200.7/200.8	0.0160	3.8	0.130	0.1600	62.0	0.0970	3.800	0.009	0.0016	0.052	1.100
	11/28/12	200.7/200.8	0.0048	0.6	0.018	0.0180	9.9	0.0081	0.460	0.010	<0.0002	0.040	0.120
	10/02/12	200.7/200.8	0.0042	0.2	<0.006	<0.006	1.8	<0.005	0.110	0.016	<0.0002	0.037	0.020
	06/12/12	200.7/200.8	0.0051	0.1	0.008	<0.006	2.4	0.0052	0.082	0.017	<0.001	0.041	0.057
	03/20/12	200.7/200.8	0.0060	0.2	0.017	0.0083	5.5	0.0082	0.120	0.017	<0.0002	0.038	0.220
	12/14/11	200.7/200.8	0.0044	0.2	0.019	<0.006	6.0	0.0081	0.110	0.011	<0.0002	0.041	0.230
	09/27/11	200.7/200.8	0.0072	0.3	0.044	0.0120	2.0	0.0140	0.210	0.200	<0.0002	0.041	0.510
	06/15/11	200.7/200.8	0.0070	0.2	<0.006	<0.006	0.7	<0.005	1.000	0.012	<0.0002	0.013	<0.01
	03/02/11	200.7/200.8	<0.0025	0.1	<0.006	<0.006	0.5	<0.005	0.017	<0.05	NA	0.044	0.014
	11/02/10	6010B	<0.02	0.1	0.008	0.0120	2.6	0.0110	0.120	<0.05	<0.0002	0.032	0.590
	09/15/10	6010B	<0.02	0.1	0.098	0.0140	3.9	0.0120	0.150	<0.05	<0.0002	0.035	0.360
	06/10/10	6010B	<0.02	0.5	<0.006	NA	NA	<0.005	NA	<0.05	<0.0002	NA	NA
	03/08/10	6020A	0.0016	0.1	0.004	0.0032	0.3	0.0012	0.018	0.004	<0.0002	0.032	0.009

8.8.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Total Metals Analytical Result Summary

STANDARDS			PARAMETERS										
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.01	2	0.05	1.0	1.0	0.015	0.2	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.1	1.3	NE	0.015	NE	0.05	0.002	0.03	NE
NMED Tap Water (Rev 2. JUN 2019)			0.000855	3.28	0.0057	0.7898	13.8	NE	2.02	0.0987	0.000626	0.0592	5.96
EPA RSL for Tap Water (NOV 2019)			0.000052	3.8	22	0.8	14	0.015	0.43	0.1	0.00063	0.004	6
WELL ID	DATE SAMPLED	METHOD											
KA-3	10/21/19	200.7/200.8	0.008	1.8	<0.006	<0.006	1.1	0.00056	1.6	<0.005	0.0000	NA	<0.01
	08/22/19	200.7/200.8	0.0067	1.5	<0.006	<0.006	1.6	0.001	1.7	0.00057	0.0001	0.0048	<0.01
	05/28/19	200.7/200.8	0.0092	1.3	<0.006	<0.006	1.6	0.00043	1.5	<0.001	<0.0002	0.0077	<0.01
	04/09/19	200.7/200.8	0.0056	1.4	<0.006	<0.006	1.6	0.0007	1.4	<0.001	NA	0.0093	0.006
	04/30/18	200.7/200.8	0.0025	1.3	<0.006	<0.006	0.23	0.00054	1.2	<0.001	<0.0002	0.0089	<0.01
	02/09/18	200.7/200.8	0.0046	1.2	<0.006	<0.006	0.27	0.00088	1.3	<0.005	0.0001	0.012	0.0044
	12/04/17	200.7/200.8	0.0044	1.7	<0.006	<0.006	0.53	<0.005	1.4	<0.01	<0.0002	0.0074	0.004
	09/05/17	200.7/200.8	0.0072	1.4	<0.006	<0.006	1.5	0.00054	1.4	0.0082	<0.0002	0.010	<0.010
	06/01/17	200.7/200.8	0.0035	0.77	<0.006	<0.006	0.55	0.00038	1.2	0.0036	<0.0002	0.016	<0.01
	02/21/17	200.7/200.8	0.0068	1.1	<0.006	<0.006	1.80	0.00035	1.1	0.0057	<0.0002	NA	0.0047
	11/14/16	200.7/200.8	0.0068	1.20	<0.006	<0.006	1.80	0.0003	1.30	0.0049	<0.0002	0.009	0.004
	09/01/16	200.7/200.8	0.0050	0.95	<0.006	<0.006	0.93	0.0004	2.70	<0.02	NA	0.014	0.007
	06/07/16	200.7/200.8	0.0047	0.77	<0.006	0.0092	0.53	0.0005	2.00	0.0045	0.0001	0.010	0.011
	10/28/15	200.7/200.8	0.0035	0.31	<0.006	<0.006	0.11	<0.0005	1.70	<0.005	<0.0002	0.013	<0.01
	08/11/15	200.7/200.8	0.0023	0.29	<0.006	<0.006	0.42	0.0008	1.60	<0.005	<0.0002	0.019	<0.01
	06/02/15	200.7/200.8	<0.01	0.35	<0.006	<0.006	0.29	<0.005	3.00	<0.01	<0.0002	0.018	<0.01
	03/10/15	200.7/200.8	<0.01	0.27	<0.006	<0.006	0.35	<0.001	1.60	<0.01	<0.0002	0.015	<0.01
	09/11/14	200.7/200.8	0.0110	0.07	<0.006	0.0084	1.00	0.0015	0.04	0.0340	<0.0002	0.047	0.018
	03/10/14	200.7/200.8	<0.005	0.11	<0.006	<0.006	0.95	<0.001	0.26	0.0082	<0.0002	0.089	0.016
	11/12/13	200.7/200.8	0.0033	0.16	<0.006	<0.006	0.22	<0.001	0.44	0.0082	<0.0002	0.021	0.010
	09/03/13	200.7/200.8	0.0022	0.17	<0.006	<0.006	0.33	<0.001	0.42	0.0034	<0.0002	0.013	0.013
	06/12/13	200.7-200.8	0.0019	0.16	<0.006	<0.006	0.40	NL	0.35	0.0030	<0.0002	0.014	<0.01
	03/18/13	200.7/200.8	<0.0025	0.08	<0.006	<0.006	0.62	0.0058	0.58	<0.0025	<0.0002	0.020	<0.01
	11/28/12	200.7/200.8	0.0060	1.30	0.0360	0.0130	30.00	<0.005	1.70	0.0100	<0.0002	0.032	0.092
	08/21/12	200.7/200.8	0.0028	0.30	<0.006	0.0070	0.32	<0.005	0.81	<0.0025	<0.0002	0.004	0.014
	06/12/12	200.7/200.8	0.0057	0.61	0.0220	0.0092	15.00	<0.005	0.93	0.0120	<0.001	0.027	0.055
	03/20/12	200.7/200.8	0.0065	0.99	0.0330	0.0170	24.00	<0.005	1.80	0.0088	<0.0002	0.023	0.095
	12/14/11	200.7/200.8	0.0038	0.34	<0.006	<0.006	1.10	<0.005	1.10	<0.0025	<0.0002	0.005	0.013
	09/27/11	200.7/200.8	0.0063	0.30	<0.006	<0.006	2.20	<0.005	1.10	0.0030	<0.0002	0.006	0.024
	06/15/11	200.7/200.8	0.0089	0.22	0.0280	<0.006	9.40	0.0140	0.16	0.0300	<0.0002	0.035	0.320
	03/02/11	200.7/200.8	0.0063	0.44	<0.006	<0.006	0.64	<0.005	1.40	<0.05	NL	0.015	<0.01
	11/02/10	6010B	<0.02	0.60	<0.006	<0.006	1.20	<0.005	1.40	<0.05	<0.0002	NL	<0.02
	09/15/10	6010B	<0.02	0.47	0.0960	<0.006	1.60	<0.005	1.30	<0.05	<0.0002	0.003	<0.02
	06/10/10	6010B	<0.02	0.17	0.0064	NL	NL	<0.005	NL	<0.05	<0.0002	NL	<0.02
	03/08/10	6020A	0.0110	0.34	0.0014	0.0114	2.35	0.0030	2.10	<0.001	<0.0001	0.007	0.021

8.8.2 NAPIS-1, NAPIS-2, NAPIS-3, KA-3
Total Metals Analytical Result Summary

STANDARDS			PARAMETERS									
			Arsenic (mg/L)	Barium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)
WQCC 20 NMAC 6.2.3103 (DEC 2018)	0.01	2	0.05	1.0	1.0	0.015	0.2	0.05	0.002	0.03	10	
40 CFR 141.62 MCL	0.01	2.0	0.1	1.3	NE	0.015	NE	0.05	0.002	0.03	NE	
NMED Tap Water (Rev 2. JUN 2019)	0.000855	3.28	0.0057	0.7898	13.8	NE	2.02	0.0987	0.000626	0.0592	5.96	
EPA RSL for Tap Water (NOV 2019)	0.000052	3.8	22	0.8	14	0.015	0.43	0.1	0.00063	0.004	6	
WELL ID	DATE SAMPLED	METHOD										

DEFINITIONS

NA = Not analyzed; NE = Not established

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Maximum Contaminant Levels for Inorganic Contaminants

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

EPA Regional Screening Level (RSL) Summary Table

8.8.3 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Dissolved Metals Analytical Result Summary

			PARAMETERS								
			Arsenic (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS											
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.01	0.05	1.0	1.0	0.015	0.2	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	0.1	1.3	NE	0.015	NE	0.05	0.03	NE
NMED Tap Water (Rev 2. JUN 2019)			0.000855	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0592	5.96
EPA RSL for Tap Water (NOV 2019)			0.000052	22	0.8	14	0.015	0.43	0.1	0.004	6
WELL ID	DATE SAMPLED	METHOD									
NAPIS-1	06/02/17	200.7/200.8	0.0023	<0.006	<0.006	<0.02	<0.0005	0.14	0.0072	0.013	0.019
	02/21/17	200.7/200.8	0.0028	<0.006	<0.006	<0.02	<0.0005	0.09	0.0082	NA	0.018
	11/14/16	200.7/200.8	0.0040	<0.006	<0.006	<0.02	<0.0005	0.093	0.012	0.036	0.004
	09/01/16	200.7/200.8	<0.02	<0.006	<0.006	<0.02	<0.0005	0.130	0.008	0.013	0.370
	06/07/16	200.7/200.8	0.0031	<0.006	<0.006	<0.02	<0.0005	0.110	0.008	0.015	<0.01
	10/28/15	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.0005	0.061	<0.01	0.013	<0.01
	08/11/15	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.0025	0.028	0.005	0.020	<0.01
	06/02/15	200.7/200.8	<0.01	<0.006	<0.006	<0.02	<0.01	0.067	<0.01	0.013	0.010
	03/10/15	200.7/200.8	<0.01	<0.006	<0.006	<0.02	<0.001	0.067	<0.02	0.013	<0.01
	11/11/14	200.7/200.8	<0.01	<0.006	<0.006	<0.02	<0.001	0.065	<0.01	0.012	0.050
	09/11/14	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.01	0.130	0.012	<0.01	0.010
	06/05/14	200.7/200.8	<0.005	<0.006	<0.006	0.0250	<0.001	0.059	0.013	0.010	<0.01
	03/10/14	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.001	0.053	<0.005	0.013	0.017
	11/12/13	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.005	0.071	0.011	0.011	<0.01
	09/09/13	200.7/200.8	<0.005	<0.03	<0.03	<0.1	<0.005	0.064	0.009	<0.01	<0.05
	06/12/13	200.7/200.8	0.0034	<0.006	<0.006	0.0570	<0.001	0.027	0.011	0.011	<0.01
	03/18/13	200.7/200.8	0.0016	<0.006	<0.006	<0.02	<0.005	0.004	0.003	0.017	<0.01
	11/28/12	200.7/200.8	0.0019	<0.006	<0.006	<0.02	<0.001	0.010	0.004	0.029	0.013
	08/21/12	200.7/200.8	0.0021	<0.006	<0.006	<0.02	<0.005	0.011	0.004	0.011	0.017
	06/12/12	200.7/200.8	0.0023	<0.006	<0.006	0.0250	<0.005	0.004	0.006	0.014	0.014
	03/20/12	200.7/200.8	0.0018	<0.006	<0.006	<0.02	<0.005	0.006	0.006	0.010	0.022
	12/14/11	200.7/200.8	0.0017	<0.006	<0.006	0.2700	<0.005	0.007	0.004	0.021	<0.01
	09/27/11	200.7/200.8	0.0029	<0.006	<0.006	<0.02	<0.005	0.056	0.009	0.032	0.011
	06/15/11	200.7/200.8	0.0047	<0.006	<0.006	<0.020	<0.005	0.002	0.017	0.016	0.028
	03/02/11	200.7/200.8	0.0013	<0.006	<0.006	0.0320	<0.005	<0.002	<0.05	0.017	<0.01
	11/02/10	6010B	<0.1	<0.006	<0.006	0.0570	<0.005	0.016	<0.25	0.034	NA
	09/15/10	6010B	<0.02	<0.006	<0.006	0.2900	0.0064	0.007	<0.05	0.011	NA
	06/08/10	6010B	<0.2	<0.006	NA	NA	<0.005	NA	<0.05	NA	NA
	03/08/10	6020A	0.0011	<0.001	0.0021	<0.01	<0.001	<0.001	0.000	0.028	0.026

8.8.3 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Dissolved Metals Analytical Result Summary

			PARAMETERS								
			Arsenic (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS											
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.01	0.05	1.0	1.0	0.015	0.2	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	0.1	1.3	NE	0.015	NE	0.05	0.03	NE
NMED Tap Water (Rev 2. JUN 2019)			0.000855	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0592	5.96
EPA RSL for Tap Water (NOV 2019)			0.000052	22	0.8	14	0.015	0.43	0.1	0.004	6
WELL ID	DATE SAMPLED	METHOD									
NAPIS-2	10/21/19	200.7/200.8	0.0036	<0.006	<0.006	1.2	<0.0005	0.79	0.0003	NA	0.007
	08/22/19	200.7/200.8	0.0030	<0.006	<0.006	1.4	<0.0005	0.82	0.0003	0.00019	0.008
	05/28/19	200.7/200.8	0.0025	<0.006	<0.006	0.4	<0.0005	0.78	<0.001	0.00022	0.016
	04/09/19	200.7/200.8	0.0030	<0.006	0.0014	0.3	0.0001	0.68	0.0002	0.00081	0.043
	04/30/18	200.7/200.8	0.0045	1.6	<0.006	1.8	<0.0005	0.91	0.0049	0.00016	0.005
	02/09/18	200.7/200.8	0.0047	<0.006	<0.006	1.6	<0.0005	1.10	0.0040	0.00029	0.005
	12/04/17	200.7/200.8	0.0049	<0.006	<0.002	1.8	<0.0005	0.94	0.0045	0.00017	0.010
	09/05/17	200.7/200.8	0.0054	0.0017	<0.006	0.56	<0.0025	0.89	<0.02	0.00054	0.026
	06/01/17	200.7/200.8	0.0035	<0.006	<0.006	0.52	0.00021	0.86	<0.01	0.00070	0.018
	02/21/17	200.7/200.8	0.0053	<0.006	<0.006	0.88	<0.0005	0.97	0.0047	NA	0.020
	11/14/16	200.7/200.8	0.0085	<0.006	<0.006	1.5	0.0003	1.1	0.0078	0.0005	<0.01
	09/01/16	200.7/200.8	0.0075	<0.006	<0.006	1.6	<0.0005	1.1	0.0066	0.0003	0.170
	06/07/16	200.7/200.8	0.0086	<0.006	<0.006	1.8	<0.0005	1.1	0.0062	0.0009	0.055
	10/28/15	200.7/200.8	0.0084	<0.006	<0.006	1.8	<0.0005	1.2	0.0097	<0.0005	0.022
	08/11/15	200.7/200.8	0.0072	<0.006	<0.006	1.4	<0.0025	1.2	<0.005	<0.0025	<0.01
	06/02/15	200.7/200.8	<0.01	<0.006	<0.006	1.2	<0.01	1.1	<0.01	<0.01	<0.01
	03/10/15	200.7/200.8	<0.01	<0.006	<0.006	1.9	<0.001	1.0	<0.01	<0.001	<0.01
	11/11/14	200.7/200.8	0.0076	<0.006	<0.006	1.8	<0.001	1.3	0.0062	<0.001	0.019
	09/11/14	200.7/200.8	0.0070	<0.006	<0.006	1.6	<0.01	1.2	0.0110	<0.01	0.047
	06/05/14	200.7/200.8	0.0064	<0.006	<0.006	2.6	<0.005	1.4	0.0100	<0.001	<0.01
	03/10/14	200.7/200.8	0.0053	<0.006	<0.006	1.8	<0.001	1.2	<0.005	<0.001	0.012
	11/12/13	200.7/200.8	0.0077	<0.006	<0.006	1.8	<0.001	1.3	0.0080	<0.001	<0.01
	09/09/13	200.7/200.8	0.0069	<0.006	<0.006	2.6	<0.005	1.3	0.0060	<0.01	0.021
	06/12/13	200.7/200.8	0.0068	<0.006	<0.006	1.7	<0.001	1.6	0.0071	<0.001	0.010
	03/18/13	200.7/200.8	0.0062	<0.006	<0.006	1.1	<0.005	1.2	0.0024	<0.002	<0.01
	11/28/12	200.7/200.8	0.0083	<0.006	<0.006	2.9	<0.001	1.8	0.0034	<0.001	0.011
	08/21/12	200.7/200.8	0.0140	<0.006	<0.006	1.9	<0.005	1.6	3.4000	<0.001	0.016
	06/12/12	200.7/200.8	0.0089	<0.006	<0.006	2.7	<0.005	1.6	0.0047	<0.001	0.180
	03/20/12	200.7/200.8	0.0093	<0.006	<0.006	3.0	<0.005	1.5	0.0042	<0.001	0.070
	12/14/11	200.7/200.8	0.0089	<0.006	<0.006	3.2	<0.005	1.3	0.0028	<0.001	<0.01
	09/27/11	200.7/200.8	0.0110	<0.006	<0.006	2.2	<0.005	1.2	0.0050	<0.001	0.015
	06/15/11	200.7/200.8	0.0120	<0.006	<0.006	3.2	<0.005	1.3	0.0095	<0.001	0.041
	03/02/11	200.7/200.8	0.0130	<0.006	<0.006	4.8	<0.005	<0.002	<0.05	<0.001	<0.01
	11/02/10	6010B	<0.1	<0.006	<0.006	2.9	<0.005	1.2	<0.05	NA	NA
	09/15/10	6010B	<0.02	<0.006	<0.006	3.7	<0.005	1.0	<0.05	<0.001	NA
	06/10/10	6010B	<0.02	<0.006	NA	NA	<0.005	NA	<0.05	NA	NA
	03/08/10	6020A	0.0047	<0.001	<0.001	3.8	<0.001	1.1	<0.001	<0.001	0.053

8.8.3 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Dissolved Metals Analytical Result Summary

			PARAMETERS								
			Arsenic (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS											
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.01	0.05	1.0	1.0	0.015	0.2	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	0.1	1.3	NE	0.015	NE	0.05	0.03	NE
NMED Tap Water (Rev 2. JUN 2019)			0.000855	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0592	5.96
EPA RSL for Tap Water (NOV 2019)			0.000052	22	0.8	14	0.015	0.43	0.1	0.004	6
WELL ID	DATE SAMPLED	METHOD									
NAPIS-3	10/21/19	200.7/200.8	0.0019	<0.006	<0.006	0.02	0.00011	0.061	0.0048	NA	0.035
	08/22/19	200.7/200.8	0.0014	<0.006	0.0065	0.39	0.00014	0.063	0.0025	0.036	0.018
	05/28/19	200.7/200.8	0.0014	<0.006	0.0022	0.069	0.00033	0.054	0.0032	0.033	0.027
	04/09/19	200.7/200.8	0.0011	<0.006	0.0050	0.015	0.00021	0.17	0.0033	0.022	0.034
	04/30/18	200.7/200.8	0.0012	<0.006	<0.006	0.0400	<0.0005	0.14	0.0029	0.022	0.008
	02/09/18	200.7/200.8	0.0026	<0.006	0.0049	<0.02	0.00028	0.12	0.0045	0.025	0.010
	12/04/17	200.7/200.8	<0.010	<0.006	0.0048	<0.020	0.00024	0.13	<0.01	0.025	0.012
	09/05/17	200.7/200.8	0.0041	<0.006	<0.006	0.14	0.00058	0.12	0.0093	0.043	0.064
	06/02/17	200.7/200.8	0.0021	<0.006	0.0041	<0.020	0.0005	0.10	0.0060	0.030	0.012
	02/21/17	200.7/200.8	0.0039	0.0015	<0.006	0.23	0.0011	0.10	0.0083	NA	0.027
	11/14/16	200.7/200.8	0.0070	0.0031	0.0080	1.40	0.0063	0.3600	0.0160	0.034	0.047
	09/01/16	200.7/200.8	0.0039	<0.006	<0.006	0.31	0.0010	0.0110	0.0096	0.023	0.047
	06/07/16	200.7/200.8	0.0072	0.0038	<0.006	0.23	0.0016	0.0033	0.0220	0.041	0.023
	10/28/15	200.7/200.8	<0.05	<0.006	<0.006	<0.02	<0.0005	0.0081	<0.05	0.040	<0.01
	08/11/15	200.7/200.8	<0.01	<0.006	<0.006	0.04	<0.0025	0.0029	0.0200	0.038	0.049
	06/02/15	200.7/200.8	<0.01	<0.006	<0.006	0.06	<0.01	0.0038	0.0160	0.043	0.049
	03/10/15	200.7/200.8	<0.02	<0.006	<0.006	<0.02	<0.001	<0.002	<0.05	0.036	0.044
	11/13/14	200.7/200.8	<0.01	<0.006	<0.006	<0.02	<0.01	<0.002	<0.05	0.039	0.089
	09/11/14	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.01	0.4700	0.0089	0.014	0.011
	06/05/14	200.7/200.8	0.0110	0.0073	<0.006	2.60	<0.01	0.0580	0.0450	0.034	0.070
	03/10/14	200.7/200.8	<0.01	<0.006	<0.006	0.24	<0.001	0.0073	0.0110	0.039	0.017
	11/12/13	200.7/200.8	0.0076	<0.006	<0.006	0.15	<0.001	0.0047	0.0290	0.036	0.024
	09/09/13	200.7/200.8	0.0063	<0.006	<0.006	0.17	<0.001	0.0075	0.0230	0.041	0.028
	06/12/13	200.7/200.8	0.0077	<0.006	<0.006	0.57	0.0014	0.0380	0.0320	0.038	0.019
	03/18/13	200.7/200.8	0.0048	<0.006	0.0065	4.60	<0.005	0.2500	0.0120	0.037	0.037
	11/28/12	200.7/200.8	0.0052	<0.006	0.0140	15.00	0.0100	0.3900	0.0120	0.035	0.100
	10/02/12	200.7/200.8	0.0040	<0.006	<0.006	3.20	<0.005	0.1400	0.0130	0.038	0.035
	06/12/12	200.7/200.8	0.0050	<0.006	<0.006	0.02	<0.005	<0.002	0.0190	0.039	0.015
	03/20/12	200.7/200.8	0.0039	0.0079	<0.006	0.51	<0.005	0.0140	0.0170	0.032	0.084
	12/14/11	200.7/200.8	0.0037	<0.006	<0.006	0.12	<0.005	0.0047	0.0130	0.040	0.018
	09/27/11	200.7/200.8	0.0064	<0.006	<0.006	0.14	<0.005	0.0035	0.0250	0.038	0.018
	06/15/11	200.7/200.8	0.0085	<0.006	<0.006	0.06	<0.005	0.9200	0.0190	0.013	0.270
	03/02/11	200.7/200.8	<0.001	<0.006	<0.006	<0.02	<0.005	<0.002	<0.05	0.039	<0.01
	11/02/10	6010B	<0.02	<0.006	<0.006	0.03	<0.005	0.0100	<0.05	0.035	NA
	09/15/10	6010B	<0.02	<0.006	<0.006	0.02	<0.005	0.0021	<0.05	0.032	NA
	06/10/10	6010B	<0.02	<0.006	NA	NA	<0.005	NA	<0.05	NA	NA
	03/08/10	6020A	0.0031	0.0027	0.0022	<0.01	<0.001	0.0014	0.0036	0.030	0.034

8.8.3 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Dissolved Metals Analytical Result Summary

			PARAMETERS								
			Arsenic (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS											
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.01	0.05	1.0	1.0	0.015	0.2	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	0.1	1.3	NE	0.015	NE	0.05	0.03	NE
NMED Tap Water (Rev 2. JUN 2019)			0.000855	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0592	5.96
EPA RSL for Tap Water (NOV 2019)			0.000052	22	0.8	14	0.015	0.43	0.1	0.004	6
WELL ID	DATE SAMPLED	METHOD									
KA-3	10/21/19	200.7/200.8	0.0080	<0.006	<0.006	0.370	0.0001	1.5	0.0004	NA	0.023
	08/22/19	200.7/200.8	0.0060	<0.006	<0.006	0.810	0.0001	1.7	0.0003	0.0051	0.008
	05/28/19	200.7/200.8	0.0052	<0.006	<0.006	0.370	0.0001	1.6	<0.001	0.0073	0.009
	04/09/19	200.7/200.8	0.0033	<0.006	0.0038	0.120	0.000094	1.5	0.00029	0.0093	0.050
	04/30/18	200.7/200.8	0.0022	<0.006	<0.006	0.046	<0.0005	1.2	0.0036	0.0086	0.007
	02/09/18	200.7/200.8	0.0033	<0.006	0.0044	0.044	0.0002	1.4	0.0085	0.0110	0.009
	12/04/17	200.7/200.8	0.0033	<0.006	<0.006	0.045	<0.0005	1.3	<0.010	0.0076	0.011
	09/05/17	200.7/200.8	0.0039	<0.006	<0.006	0.088	<0.0005	1.3	<0.020	0.010	0.046
	06/01/17	200.7/200.8	0.0028	<0.006	<0.006	0.056	<0.0005	1.1	0.0047	0.015	0.026
	02/21/17	200.7/200.8	0.0019	<0.006	<0.006	0.17	<0.0005	1.1	0.0035	NA	0.028
	11/14/16	200.7/200.8	0.0036	<0.006	<0.006	0.1200	<0.0005	1.30	0.0071	0.0099	0.0031
	09/01/16	200.7/200.8	0.0029	<0.006	<0.006	0.0590	<0.0005	1.90	0.0049	0.0075	0.0410
	06/07/16	200.7/200.8	0.0038	<0.006	<0.006	0.1000	<0.0005	1.50	0.0058	0.0095	0.0052
	10/28/15	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.0005	0.61	<0.01	0.0120	<0.01
	08/11/15	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.0025	0.64	<0.005	0.0180	0.2800
	06/02/15	200.7/200.8	<0.01	<0.006	<0.006	<0.02	<0.01	0.77	<0.01	0.0190	<0.01
	03/10/15	200.8	0.0020	<0.006	<0.006	<0.02	<0.001	0.69	<0.01	0.0180	0.0100
	11/11/14	200.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/11/14	200.7/200.8	0.0110	<0.006	<0.006	<0.02	<0.01	<0.002	0.0350	0.0390	<0.01
	06/05/14	200.7	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/10/14	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.001	0.38	<0.005	0.0480	0.0120
	11/12/13	200.7/200.8	0.0036	<0.006	<0.006	<0.02	<0.001	0.37	0.0091	0.0200	0.0110
	09/09/13	200.7/200.8	<0.005	<0.006	<0.006	<0.02	<0.005	0.37	0.0056	0.0110	0.0300
	06/12/13	200.7/200.8	0.0030	<0.006	<0.006	<0.02	<0.001	0.31	0.0077	0.0150	<0.01
	03/18/13	200.7/200.8	0.0019	<0.006	<0.006	<0.02	<0.005	0.53	0.0029	0.0190	0.0220
	11/28/12	200.7/200.8	0.0046	<0.006	<0.006	4.2000	0.0046	0.61	0.0087	0.0240	0.0210
	08/21/12	200.7/200.8	0.0031	<0.006	<0.006	<0.02	<0.005	0.39	0.0047	0.0130	0.0220
	06/12/12	200.7/200.8	0.0038	<0.006	<0.006	0.1500	<0.005	0.38	0.0072	0.0150	0.0120
	03/20/12	200.7/200.8	0.0033	0.0110	<0.006	0.3500	<0.005	0.35	0.0085	0.0180	0.0330
	12/14/11	200.7/200.8	0.0034	<0.006	<0.006	0.1400	<0.005	0.95	0.0021	0.0042	<0.01
	09/27/11	200.7/200.8	0.0060	<0.006	<0.006	0.0830	<0.005	0.89	0.0057	0.0067	0.0180
	06/15/11	200.7/200.8	0.0100	<0.006	<0.006	<0.02	<0.005	0.00	0.0420	0.0340	0.0440
	03/02/11	200.7/200.8	0.0062	<0.006	<0.006	0.1100	<0.005	0.04	<0.05	0.0100	<0.01
	11/02/10	6010B	<0.1	<0.006	<0.006	0.3200	<0.005	1.40	<0.05	NA	NA
	09/15/10	6010B	<0.02	<0.006	<0.006	0.5600	<0.005	1.20	<0.05	0.0010	NA
	06/10/10	6010B	<0.02	<0.006	NA	NA	<0.005	NA	<0.05	NA	NA
	03/08/10	6020A	0.0098	<0.001	0.0043	1.5500	<0.001	1.86	0.0010	0.0070	0.0382

8.8.3 NAPIS-1, NAPIS-2, NAPIS-3, KA-3

Dissolved Metals Analytical Result Summary

			PARAMETERS								
			Arsenic (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Uranium (mg/L)	Zinc (mg/L)
STANDARDS											
WQCC 20 NMAC 6.2.3103 (DEC 2018)			0.01	0.05	1.0	1.0	0.015	0.2	0.05	0.03	10.0
40 CFR 141.62 MCL			0.01	0.1	1.3	NE	0.015	NE	0.05	0.03	NE
NMED Tap Water (Rev 2. JUN 2019)			0.000855	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0592	5.96
EPA RSL for Tap Water (NOV 2019)			0.000052	22	0.8	14	0.015	0.43	0.1	0.004	6
WELL ID	DATE SAMPLED	METHOD									

DEFINITIONS

NA = Not analyzed; NE = Not established

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Maximum Contaminant Levels for Inorganic Contaminants

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

EPA Regional Screening Level (RSL) Summary Table

8.10 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
BTEX, MTBE and DRO/GRO/MRO Analytical Result Summary

STANDARDS			PARAMETERS							
			Benzene (mg/L)	Toluene (mg/L)	Ethyl- benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.005	1	0.7	0.62	0.1	NE	NE	NE
40 CFR 141.61 MCL			0.005	1	0.7	10	NE	NE	NE	NE
NMED TAP WATER (JUNE 2019)			0.00455	1.09	0.0149	0.193	0.143	NE	NE	NE
EPA RSL TAP WATER (NOVEMBER 2019)			0.0046	1.1	0.0015	0.19	0.14	NE	NE	NE
NMED SSG (JUNE 2019)			NA	NE	NE	NE	NE	0.0167	0.0101	0.0858
SAMPLE ID	DATE SAMPLED	METHOD								
East LDU ³	11/19/19	8260B/8015D	1.3	0.36	0.082	0.21	<0.005	1.1	5.2	<2.5
	08/22/19	8260B/8015D	0.6	0.15	0.057	0.15	0.0024	2.8	2.2	<5.0
	05/28/19	8021B/8015D	0.89	0.072	0.091	0.056	NA	2.4	2.4	<5.0
	04/09/19	8260B/8015D	1.5	0.028	0.15	0.027	0.0012	3	3.5	<5.0
	04/30/18	8260B/8015D	0.71	0.037	0.26	0.6	<0.01	4.2	5.1	<5.0
	02/12/18	8260B/8015D	1.9	0.047	0.29	0.08	<0.0024	4.5	7.9	<5.0
	12/04/17	8260B/8015D	1.7	0.06	0.18	0.18	<0.005	4.4	7.6	<5.0
	09/05/17	8260B/8015D	0.53	0.23	0.19	0.9	<0.01	6.9	5.5	<5.0
	06/02/17	8260B/8015D	0.17	0.0066	0.063	0.075	0.0025	7.1	2	<5.0
	02/21/17	8260B/8015D	0.23	0.14	0.14	0.3	0.013	27	4.4	<5.0
	11/17/16	8260B/8015D	0.11	0.0082	0.1	0.0098	0.0063	16	1.6	<5.0
	06/07/16	8260B/8015D	0.36	0.032	0.025	0.097	0.013	16	4.9	<5.0
	03/01/16	8260B/8015D	0.41	0.03	0.27	0.14	0.011	21	5.6	<5.0
	10/29/15	8260B/8015D	0.56	0.044	0.25	1.1	0.022	24	5.5	<5.0
	08/11/15	8260B/8015D	1.2	1.1	0.34	1.7	<0.02	19	15	<5.0
	06/03/15	8260B/8015D	1.2	1	0.43	2	<0.02	17	0.54	<5.0
	03/10/15	8021B/8015D	1.3	0.46	0.47	1.9	<0.05	26	9.4	<5.0
	11/11/14	8021B/8015B	1.7	4.8	0.72	8.2	<0.5	17	38	NL
	06/03/14	8021B/8015B	8.9	21	2.3	19	<0.5	29	130	<5.0
	03/10/14	8021B/8015B	9.8	27	3.8	25	<0.5	310	200	<50
	11/12/13	8021B/8015B	0.19	0.17	0.13	5.6	<0.5	410	32	NA
	06/12/13	8021B/8015B	9.4	2.2	0.51	6.1	<0.5	18	38	<5.0
	03/18/13	8021B/8015B	12	4.6	0.61	7	<0.5	28	50	<5.0
	11/28/12	8021B/8015B	1.1	0.89	0.51	6.7	<0.25	19	27	<5.0
	08/21/12	8021B/8015B	1.2	0.33	0.46	5.7	<0.25	10	17	<5.0
	06/12/12	8021B/8015B	1.3	1.1	0.46	6.3	<0.25	27	24	<5.0
	03/20/12	8021B/8015B	1.4	3.1	0.56	8	<0.5	30	31	<5.0

8.10 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
BTEX, MTBE and DRO/GRO/MRO Analytical Result Summary

STANDARDS			PARAMETERS							
			Benzene (mg/L)	Toluene (mg/L)	Ethyl- benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.005	1	0.7	0.62	0.1	NE	NE	NE
40 CFR 141.61 MCL			0.005	1	0.7	10	NE	NE	NE	NE
NMED TAP WATER (JUNE 2019)			0.00455	1.09	0.0149	0.193	0.143	NE	NE	NE
EPA RSL TAP WATER (NOVEMBER 2019)			0.0046	1.1	0.0015	0.19	0.14	NE	NE	NE
NMED SSG (JUNE 2019)			NA	NE	NE	NE	NE	0.0167	0.0101	0.0858
SAMPLE ID	DATE SAMPLED	METHOD								
East LDU ³ (continued)	12/14/11	8021B/8015B	1.8	4.2	0.56	6.7	<0.25	33	33	<5.0
	09/26/11	8021B/8015B	2.8	7.2	0.68	7	<0.13	34	43	<50
	06/15/11	8260B/8015B	1.8	0.28	0.32	3.8	<0.02	27	13	<5.0
	03/03/11	8021B/8015B	2.6	7.2	0.45	3.9	<0.5	35	83	<5.0
	11/11/10	8021B/8015B	10	28	1.3	9	<0.05	63	100	
	09/20/10	8021B/8015B	10	20	1.1	8.1	<0.13	120	100	
	03/18/10	8021B/8015B	9.1	17	1.4	9.9	NL	16000	120	
West LDU ²	11/19/19	8260B/8015D	0.0023	<0.001	<0.001	<0.0015	0.0027	2.3	0.13	<2.5
	08/22/19	8260B/8015D	0.00098	<0.001	0.00023	0.011	0.0369	6.7	0.32	<5.0
	05/28/19	8021B/8015D	0.0085	<0.002	0.004	0.0023	NA	7.8	0.32	<5.0
	04/09/19	8260B/8015D	0.16	<0.002	0.02	0.0024	0.0029	7.4	0.57	<5.0
	04/30/18	8260B/8015D	2.7	0.016	0.072	0.035	<0.01	9.4	5.8	<5.0
	02/12/18	8260B/8015D	1.4	0.13	0.042	0.074	0.0056	7.6	5	<5.0
	12/04/17	8260B/8015D	0.063	0.0018	0.033	0.0026	0.0018	7.7	1.2	<5.0
	09/05/17	8260B/8015D	0.088	0.0012	0.015	0.0051	0.0033	9.8	0.76	<5.0
	06/02/17	8260B/8015D	0.093	0.0041	0.015	0.016	0.0025	8.5	1.1	<5.0
	02/21/17	8260B/8015D	0.29	0.024	0.032	0.06	0.0098	14	2.6	<5.0
	11/17/16	8260B/8015D	0.14	0.015	0.038	0.024	<0.01	8.6	2.2	<5.0
	06/07/16	8260B/8015D	0.41	0.049	0.05	0.14	0.0032	7.3	3.6	<5.0
	03/01/16	8260B/8015D	0.26	0.053	0.027	0.047	<0.02	7.2	1.9	<5.0
	10/29/15	8260B/8015D	0.5	0.19	0.03	0.29	<0.01	12	3	<5.0
	08/11/15	8260B/8015D	2.7	0.74	0.083	0.44	<0.02	9.9	11	<5.0
	06/03/15	8260B/8015D	Insufficient water volume - Did not sample							
	03/10/15	8021B/8015D	0.45	0.086	0.085	0.2	<0.012	12	2.7	<5.0
	09/11/14	8021B/8015B	0.87	0.3	0.11	0.94	<0.12	6.6	6.7	<5.0
	06/03/14	8021B/8015B	0.52	0.035	0.18	2.8	<0.05	8	12	<5.0

8.10 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
BTEX, MTBE and DRO/GRO/MRO Analytical Result Summary

STANDARDS			PARAMETERS							
			Benzene (mg/L)	Toluene (mg/L)	Ethyl- benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.005	1	0.7	0.62	0.1	NE	NE	NE
40 CFR 141.61 MCL			0.005	1	0.7	10	NE	NE	NE	NE
NMED TAP WATER (JUNE 2019)			0.00455	1.09	0.0149	0.193	0.143	NE	NE	NE
EPA RSL TAP WATER (NOVEMBER 2019)			0.0046	1.1	0.0015	0.19	0.14	NE	NE	NE
NMED SSG (JUNE 2019)			NA	NE	NE	NE	NE	0.0167	0.0101	0.0858
SAMPLE ID	DATE SAMPLED	METHOD								
	03/10/14	8021B/8015B	0.7	0.14	0.17	3.3	<0.25	14	13	<5.0
West LDU ² (continued)	11/12/13	8021B/8015B	2.8	3.7	0.31	6	<0.25	17	30	NA
	09/05/13	8021B/8015B	1.5	3.1	0.28	7.8	<0.25	110	47	<50
	06/12/13	8021B/8015B	6	3	0.49	5.2	<0.25	4.7	31	<5.0
	03/18/13	8021B/8015B	3.9	0.42	0.38	4	<0.25	2.6	20	<5.0
	11/28/12	8021B/8015B	2	1.9	0.57	5.1	<0.25	5.7	25	<5.0
	08/21/12	8021B/8015B	1.8	3.2	0.66	3.1	<0.25	4	18	<5.0
	06/12/12	8021B/8015B	1.4	3.5	0.41	5.7	<0.25	9	27	<5.0
	03/20/12	8021B/8015B	1.6	6	0.69	7.6	<0.012	6.9	42	<5.0
	12/14/11	8021B/8015B	2.3	8.3	0.83	7.2	<0.25	22	45	<5.0
	09/26/11	8021B/8015B	3.6	9.3	0.59	5.5	<0.025	14	45	<5.0
	06/15/11	8260B/8015B	0.094	0.33	0.029	0.26	<0.01	13	2.2	<5.0
	03/03/11	8021B/8015B	6.1	17	0.92	7.9	<0.5	15	40	<5.0
	11/11/10	8021B/8015B	7	18	0.9	6.1	<0.001	16	67	
	09/20/10	8021B/8015B	3.1	5.8	0.36	2.9	<0.0025	9	26	
	03/18/10	8021B/8015B	2.7	4.2	0.19	1.4	NL	16	24	
Oil Sump LDU ¹	06/12/13	8021B/8015B	4.5	9.5	0.72	6.3	<0.5	17	42	<5.0
	03/18/13	8021B/8015B	5.1	8.8	0.71	5.5	<0.5	20	40	<5.0
	11/28/12	8021B/8015B	2.7	6.6	0.57	5.4	<0.5	13	37	<5.0
	08/21/12	8021B/8015B	1.8	6	0.59	5.5	<0.5	8.8	28	<5.0
	06/12/12	8021B/8015B	2.1	6.2	0.59	5.1	<0.5	18	36	<5.0
	03/20/12	8021B/8015B	2	8.1	0.89	6.9	<0.5	42	45	<5.0
	12/14/11	8021B/8015B	3.4	7.5	0.76	7.4	<0.5	14	52	<5.0
	09/26/11	8021B/8015B	3.5	10	0.76	6.4	<0.5	18	49	<50
	06/15/11	8260B/8015B	3	7.1	0.48	3.9	<0.2	20	38	<5.0
	03/03/11	8021B/8015B	5.6	13	1.2	7.9	<0.5	680	120	<15

8.10 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)
BTEX, MTBE and DRO/GRO/MRO Analytical Result Summary

STANDARDS			PARAMETERS							
			Benzene (mg/L)	Toluene (mg/L)	Ethyl- benzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DRO (mg/L)	GRO (mg/L)	MRO (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.005	1	0.7	0.62	0.1	NE	NE	NE
40 CFR 141.61 MCL			0.005	1	0.7	10	NE	NE	NE	NE
NMED TAP WATER (JUNE 2019)			0.00455	1.09	0.0149	0.193	0.143	NE	NE	NE
EPA RSL TAP WATER (NOVEMBER 2019)			0.0046	1.1	0.0015	0.19	0.14	NE	NE	NE
NMED SSG (JUNE 2019)			NA	NE	NE	NE	NE	0.0167	0.0101	0.0858
SAMPLE ID	DATE SAMPLED	METHOD								
	11/11/10	8021B/8015B	8.8	19	1.6	10	<0.2	390	110	
Oil Sump LDU ¹ (continued)	09/20/10 03/18/10	8021B/8015B 8021B/8015B	9.4 5.6	29 33	6.1 6.4	40 38	<0.5 <0.95	1400 35	650 69	

DEFINITIONS

NA = Not analyzed ; NE = Not Established

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.61 Maximum Contaminant Levels for Organic Contaminants

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

EPA Regional Screening Level (RSL) Summary Table

NMED Soil Screening Guidance Volume 1, Table 6-4 (groundwater)

NOTES

1) Oil Sump LDU - Dry - 2013 Third and fourth Quarters. 2014, 2015, 2016 and 2017 - dry.

2) West LDU - 2014 - fourth quarter - not enough water to collect samples (West bay out of service). 2015 - Second Quarter - not enough water to collect sample.

3) East LDU - No samples collected third quarter 2014.

8.10.1 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)

Total Metals Analytical Result Summary

STANDARDS			PARAMETERS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.01	2.0	0.005	0.05	1.0	1.0	0.015	0.2	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	0.002	0.03	NE
NMED TAP WATER (JUNE 2019)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.000626	0.0592	5.96
EPA RSL TAP WATER (NOVEMBER 2019)			0.000052	3.8	0.0092	22	0.8	14	0.015	0.43	0.1	0.00063	0.004	6
SAMPLE ID	DATE SAMPLED	METHOD												
East LDU ³	11/19/19	200.7/200.8	0.00110	0.38	<0.002	0.05	<0.006	0.2	<0.0005	0.11	<0.001	<0.0002	<0.0005	0.071
	08/22/19	200.7/200.8	0.00046	0.38	<0.002	0.05	<0.006	0.2	0.00015	0.11	<0.001	0.00013	0.00012	0.0073
	05/28/19	200.7/200.8	<0.001	0.12	<0.002	0.094	<0.006	1.3	<0.0005	0.79	<0.001	<0.0002	<0.0005	<0.01
	04/09/19	200.7/200.8	0.00032	0.11	<0.002	0.093	<0.006	0.12	0.00022	0.25	<0.001	NA	0.00021	0.013
	04/30/18	200.7/200.8	<0.001	0.38	<0.002	0.05	<0.006	0.2	<0.0005	0.11	<0.001	<0.0002	<0.0005	0.02
	02/12/18	200.7/200.8	<0.001	0.22	<0.0002	0.087	0.0043	0.97	0.00035	0.54	<0.001	NA	<0.0005	0.027
	12/04/17	200.7/200.8	0.00099	0.43	<0.002	0.069	<0.006	1.3	0.00048	0.25	<0.001	<0.0002	<0.0005	0.041
	09/05/17	200.7/200.8	0.00036	0.32	<0.002	0.054	0.0018	0.23	0.00021	0.058	<0.005	<0.0002	<0.0005	0.015
	06/02/17	200.7/200.8	0.00036	0.23	<0.002	0.05	0.0024	0.32	0.00027	0.13	<0.001	<0.0002	<0.0005	0.013
	02/21/17	200.7/200.8	0.0049	0.13	<0.002	1.2	0.039	84	0.0018	14	0.0025	0.00022	NA	0.063
	11/17/16	200.7/200.8	0.0033	0.097	<0.002	0.53	0.0097	55	0.0027	16	0.0023	0.00028	<0.0025	0.74
	06/07/16	200.7/200.8	0.0053	0.16	<0.002	0.57	0.015	3.8	0.0011	3.6	0.0017	0.00016	0.00062	0.088
	03/01/16	200.7/200.8	0.0046	0.13	<0.002	0.47	<0.006	1.5	0.00026	8.0	0.0013	0.000065	0.00048	0.056
	10/29/15	200.7/200.8	0.0052	0.21	<0.002	0.74	<0.006	0.051	<0.005	3.3	0.0029	<0.0002	<0.005	<0.01
	08/11/15	200.7/200.8	<0.05	0.31	<0.002	0.95	<0.006	0.29	<0.025	2.7	<0.05	<0.0002	<0.025	0.016
	06/03/15	200.7/200.8	0.0089	0.34	<0.002	0.94	<0.006	0.84	<0.025	3.0	<0.005	<0.0002	<0.0025	<0.01
	03/10/15	200.7/200.8	0.0047	0.16	<0.002	0.85	<0.006	3.0	<0.001	6.5	0.0024	<0.0002	0.0013	0.054
	11/11/14	200.7/200.8	0.0015	0.12	<0.002	0.22	<0.006	19	<0.001	5.4	<0.001	<0.0002	<0.001	0.18
	06/03/14	200.7/200.8	0.019	0.33	<0.002	0.54	<0.006	1.1	<0.005	1.5	<0.005	<0.0002	<0.005	0.027
	03/10/14	200.7/200.8	0.0093	0.2	<0.002	0.71	<0.006	4.4	<0.005	3.1	<0.005	0.00022	<0.005	0.12
	11/12/13	200.7/200.8	0.012	0.35	<0.01	0.44	<0.03	0.32	<0.005	0.26	0.0063	<0.0002	<0.005	<0.05
	06/12/13	200.7/200.8	0.007	0.56	<0.002	0.72	<0.006	0.091	<0.005	0.56	0.0081	<0.0002	<0.005	<0.01
	03/18/13	200.7/200.8	0.0059	0.48	<0.002	0.76	<0.006	0.09	<0.005	0.62	0.0027	<0.0002	<0.0025	<0.01
	11/28/12	200.7/200.8	0.0095	0.53	<0.002	0.71	<0.006	0.23	<0.005	1.1	0.0036	<0.0002	<0.0025	<0.01
	08/21/12	200.7/200.8	0.0094	0.67	<0.002	0.51	<0.006	0.099	<0.005	1.2	<0.05	<0.0002	<0.0025	<0.01
	06/12/12	200.7/200.8	0.0099	0.6	<0.002	0.31	<0.006	0.17	<0.005	1.2	0.0065	<0.001	<0.005	<0.01
	03/20/12	200.7/200.8	0.0032	0.44	<0.002	0.11	<0.006	2.3	<0.005	0.58	0.0026	<0.0002	<0.0025	0.064
	12/14/11	200.7/200.8	0.0082	0.34	<0.002	0.14	<0.006	0.54	<0.005	0.42	<0.0025	<0.0002	<0.0025	0.018
	09/26/11	200.7/200.8	0.0039	0.59	<0.002	0.12	<0.006	0.58	<0.005	0.56	<0.0025	<0.0002	<0.0025	0.036
	06/15/11	200.7/200.8	0.027	0.94	<0.002	0.14	0.13	31	0.047	1.3	0.037	<0.0002	<0.0025	3.3
	03/03/11	200.7/200.8	0.0058	0.48	<0.002	0.035	<0.006	0.57	<0.005	0.39	<0.05	<0.0002	<0.0025	0.014
	11/11/10	6010B	<0.1	0.94	<0.01	0.12	<0.03	1.1	<0.025	1.6	<0.25	<0.0002	<0.001	<0.1
	09/20/10	6010B	<0.02	0.54	<0.002	0.039	<0.006	7.6	<0.005	0.8	<0.05	<0.0008	<0.005	0.21
	03/18/10	6010B	<0.1	1.3	<0.01	0.25	0.073	24	<0.025	2.0	<0.25	<0.0008	<0.001	1.3

8.10.1 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)

Total Metals Analytical Result Summary

STANDARDS			PARAMETERS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.01	2.0	0.005	0.05	1.0	1.0	0.015	0.2	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	0.002	0.03	NE
NMED TAP WATER (JUNE 2019)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.000626	0.0592	5.96
EPA RSL TAP WATER (NOVEMBER 2019)			0.000052	3.8	0.0092	22	0.8	14	0.015	0.43	0.1	0.00063	0.004	6
SAMPLE ID	DATE SAMPLED	METHOD												
West LDU ²	11/19/19	200.7/200.8	<0.02	0.062	<0.002	0.15	<0.006	51	<0.0025	19	<0.02	<0.0002	0.00082	0.029
	08/22/19	200.7/200.8	0.00046	0.073	<0.002	0.24	<0.006	38	0.00047	28	<0.001	0.00018	0.00062	0.029
	05/28/19	200.7/200.8	<0.005	0.071	<0.01	0.7	<0.03	770	0.0004	76	<0.005	<0.0002	<0.0025	0.16
	04/09/19	200.7/200.8	<0.005	0.092	<0.01	0.74	<0.03	1300	0.00016	77	<0.005	NA	<0.0025	0.072
	04/30/18	200.7/200.8	0.0051	0.094	<0.002	0.66	<0.006	0.92	<0.0025	1.4	<0.005	0.000097	0.00069	0.065
	02/12/18	200.7/200.8	0.0034	0.1	<0.002	0.43	0.0066	1.5	0.00085	2.1	0.003	NA	0.0013	0.095
	12/04/17	200.7/200.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/05/17	200.7/200.8	0.0038	0.11	<0.002	1.3	<0.006	26	0.00048	9.3	<0.005	<0.0002	<0.0025	0.056
	06/02/17	200.7/200.8	0.0028	0.11	<0.002	0.35	<0.006	44	0.00055	16	<0.005	0.000071	0.0021	0.33
	02/21/17	200.7/200.8	0.0072	0.22	<0.002	2.1	<0.006	1.4	<0.0025	2.6	0.005	0.000064	NA	0.014
	11/17/16	200.7/200.8	0.004	0.26	<0.002	0.77	<0.006	3.3	0.00083	0.6	0.0029	0.00026	<0.0025	0.079
	06/07/16	200.7/200.8	0.0051	0.41	<0.002	1.2	<0.006	0.49	0.00043	0.5	0.003	0.00010	0.00034	0.016
	03/01/16	200.7/200.8	0.0051	0.31	<0.002	1.5	<0.006	0.6	0.00022	1.1	0.0034	0.00007	0.00066	0.018
	10/29/15	200.7/200.8	0.005	0.57	<0.002	1.2	<0.006	0.64	0.00055	0.7	<0.005	<0.0002	0.00058	0.027
	08/11/15	200.7/200.8	<0.02	0.6	<0.002	1.4	<0.006	1.9	<0.1	1.2	<0.02	<0.0002	<0.01	0.081
	03/10/15	200.7/200.8	0.0046	0.43	<0.002	0.76	<0.006	7.1	0.0016	3.3	0.0046	<0.0002	0.0012	0.21
	09/11/14	200.7/200.8	0.0031	0.52	<0.002	0.28	<0.006	5.1	0.0013	0.7	0.0034	<0.0002	<0.001	0.57
	06/03/14	200.7/200.8	<0.005	0.15	<0.002	0.058	<0.006	16	<0.005	2.0	<0.005	<0.0002	<0.005	0.5
	03/10/14	200.7/200.8	<0.005	0.069	<0.002	0.15	<0.006	9.0	<0.001	3.8	<0.005	<0.0002	<0.001	0.68
	11/12/13	200.7/200.8	0.0099	0.18	<0.002	0.16	<0.006	0.34	<0.005	1.4	0.014	<0.0002	<0.005	0.032
	09/05/13	200.7/200.8	0.0088	0.23	<0.002	0.32	<0.006	37	<0.005	2.0	<0.02	<0.0002	<0.005	1.1
	06/12/13	200.7/200.8	0.0053	0.22	<0.002	0.036	<0.006	0.31	<0.005	0.29	0.0097	<0.0002	<0.005	<0.01
	03/18/13	200.7/200.8	0.0036	0.15	<0.002	0.046	<0.006	0.71	<0.005	0.32	<0.0025	<0.0002	<0.0025	0.026
	11/28/12	200.7/200.8	0.0031	0.17	<0.002	0.079	<0.006	0.72	<0.005	0.57	<0.0025	<0.0002	<0.0025	0.016
	08/21/12	200.7/200.8	<0.0025	0.4	<0.002	0.036	<0.006	0.26	<0.005	0.22	<0.05	<0.0002	<0.0025	<0.01
	06/12/12	200.7/200.8	0.0038	0.36	<0.002	0.02	<0.006	0.16	<0.005	0.2	0.0049	<0.001	<0.0025	<0.01
	03/20/12	200.7/200.8	0.0028	0.21	<0.002	0.011	<0.006	1.3	<0.005	0.22	0.0035	<0.0002	<0.0025	0.014
	12/14/11	200.7/200.8	0.011	1.4	<0.002	0.082	0.045	9.1	0.016	0.34	<0.005	0.0036	<0.0025	0.87
	09/26/11	200.7/200.8	0.0041	0.23	<0.002	0.072	<0.006	1.5	<0.005	0.89	0.0048	0.00027	<0.0025	0.064
	06/15/11	200.7/200.8	0.012	0.65	<0.002	0.093	<0.006	1.3	<0.005	1.1	0.025	<0.0002	<0.0025	0.061
	03/03/11	200.7/200.8	0.0083	0.49	<0.002	0.08	<0.006	4.1	<0.005	1.3	<0.05	<0.0002	<0.0025	0.067
	11/11/10	6010B	<0.02	0.5	<0.002	0.15	<0.006	0.66	<0.005	0.68	<0.05	<0.0002	<0.001	<0.02
	09/20/10	6010B	<0.02	0.27	<0.002	0.067	<0.006	0.31	NL	0.84	<0.05	<0.0002	<0.05	<0.02
	03/18/10	6010B	<0.02	0.2	<0.002	2.4	<0.006	5.3	<0.005	3.1	<0.05	<0.0008	<0.001	<0.05

8.10.1 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)

Total Metals Analytical Result Summary

STANDARDS			PARAMETERS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Mercury (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.01	2.0	0.005	0.05	1.0	1.0	0.015	0.2	0.05	0.002	0.03	10
40 CFR 141.62 MCL			0.01	2.0	0.005	0.1	1.3	NE	0.015	NE	0.05	0.002	0.03	NE
NMED TAP WATER (JUNE 2019)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.000626	0.0592	5.96
EPA RSL TAP WATER (NOVEMBER 2019)			0.000052	3.8	0.0092	22	0.8	14	0.015	0.43	0.1	0.00063	0.004	6
SAMPLE ID	DATE SAMPLED	METHOD												
Oil Sump LDU ¹	06/12/13	200.7/200.8	0.018	0.43	<0.002	0.12	<0.006	0.42	<0.005	1.1	0.015	<0.0002	<0.005	0.022
	03/18/13	200.7/200.8	0.018	0.33	<0.002	0.11	<0.006	0.61	<0.005	1.1	0.0049	<0.0002	<0.0025	0.03
	11/28/12	200.7/200.8	0.011	0.34	<0.002	0.085	<0.006	0.8	<0.005	1.1	0.0046	<0.0002	<0.0025	0.041
	08/21/12	200.7/200.8	0.011	0.45	<0.002	0.069	<0.006	0.86	<0.005	1.1	<0.05	<0.0002	<0.0025	0.055
	06/12/12	200.7/200.8	0.017	0.56	<0.002	0.052	0.018	5.8	0.0086	0.84	0.0097	0.0031	<0.005	0.43
	03/20/12	200.7/200.8	0.02	0.52	<0.002	0.048	0.0093	4.5	0.0065	0.82	0.012	0.0017	<0.0025	0.22
	12/14/11	200.7/200.8	0.012	0.24	0.002	0.034	<0.006	0.59	<0.005	0.37	0.004	<0.0002	<0.0025	0.018
	09/26/11	200.7/200.8	0.031	1.8	0.0022	0.16	0.62	120	0.2	0.93	0.0072	0.0077	0.0026	11
	06/15/11	200.7/200.8	0.0065	0.5	<0.01	0.039	<0.03	0.38	<0.025	0.35	0.004	<0.0002	<0.0025	<0.05
	03/03/11	200.7/200.8	0.0098	0.62	<0.002	0.072	<0.006	9.4	0.0056	0.81	<0.05	0.0024	<0.0025	0.47
	11/10/10	6010B	<0.1	7.2	<0.01	0.18	0.25	150	0.11	2.3	<0.25	0.017	<0.004	7.9
	09/20/10	6010B	<0.1	15	<0.01	0.23	0.59	130	0.24	1.6	<0.25	0.011	0.016	13
	03/18/10	6010B	<2.0	<2.0	<0.2	1.1	4.5	NL	1.7	3.3	<5.0	<0.004	0.0461	88

DEFINITIONS

NA = Not analyzed ; NE = Not Established

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

- a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Maximum Contaminant Levels for Inorganic Contaminants

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

EPA Regional Screening Level (RSL) Summary Table

NOTES

- 1) Oil Sump LDU - Dry - 2013 Third and fourth Quarters. 2014, 2015, 2016 and 2017 - dry.
- 2) West LDU - 2014 - fourth quarter - not enough water to collect samples (West bay out of service). 2015 - Second Quarter - not enough water to collect samples.
- 3) East LDU - No samples collected third quarter 2014.

8.10.2 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)

Dissolved Metals Analytical Result Summary

STANDARDS			PARAMETERS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.01	2	0.005	0.05	1	1	0.015	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL			0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.03	NE
NMED TAP WATER (JUNE 2019)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL TAP WATER (NOVEMBER 2019)			0.000052	3.8	0.0092	22	0.8	14	0.015	0.43	0.1	0.094	0.004	6
SAMPLE ID	DATE SAMPLED	METHOD												
East LDU ³	11/19/19	200.7/200.8	0.00063	0.054	<0.002	0.073	<0.006	0.28	<0.0005	0.33	<0.001	0.0012	<0.0005	0.025
	08/22/19	200.7/200.8	0.00027	0.061	<0.002	0.094	<0.006	4.8	<0.0005	0.95	<0.001	<0.005	0.00011	0.0067
	05/28/19	200.7/200.8	<0.001	0.12	<0.002	0.067	<0.006	1.3	<0.0005	0.83	<0.001	0.00098	<0.0005	0.013
	04/09/19	200.7/200.8	<0.001	0.11	<0.002	0.028	<0.006	0.039	<0.0005	0.28	<0.001	0.0019	<0.0005	0.013
	04/30/18	200.7/200.8	<0.001	0.38	<0.002	0.02	<0.006	0.08	<0.0005	0.11	0.0024	<0.005	<0.0005	0.01
	02/12/18	200.7/200.8	<0.001	0.21	<0.002	0.048	<0.006	0.041	<0.0005	0.53	<0.001	<0.005	<0.0005	0.01
	12/04/17	200.7/200.8	<0.001	0.41	<0.002	0.019	<0.006	0.039	<0.0005	0.25	<0.001	<0.005	<0.0005	0.011
	09/05/17	200.7/200.8	0.00034	0.31	<0.002	0.013	<0.006	0.058	<0.0005	0.055	<0.001	<0.005	<0.0005	0.022
	06/02/17	200.7/200.8	0.00037	0.22	<0.002	0.026	<0.006	0.23	<0.0005	0.13	<0.001	<0.005	<0.0005	0.012
	02/21/17	200.7/200.8	0.0039	0.13	<0.002	1.2	<0.006	91	0.00069	15	0.0032	<0.005	NA	0.057
	11/17/16	200.7/200.8	0.0025	0.085	<0.002	0.44	<0.006	47	<0.0005	16	0.0022	<0.005	0.0001	0.018
	06/07/16	200.7/200.8	0.0038	0.15	<0.002	0.44	<0.006	0.36	<0.0025	3.8	0.002	<0.005	0.0049	0.011
	03/01/16	200.7/200.8	0.0048	0.12	<0.002	0.41	<0.006	0.099	<0.0025	7.5	0.0036	<0.005	0.00044	0.017
	10/29/15	200.7/200.8	0.0052	0.21	<0.002	0.74	<0.006	0.051	<0.005	3.3	0.0029	<0.005	<0.005	<0.01
	08/11/15	200.7/200.8	<0.05	0.29	<0.002	0.88	<0.006	0.026	<0.05	2.8	<0.05	<0.005	<0.05	<0.01
	06/03/15	200.7/200.8	<0.01	0.28	<0.002	0.86	<0.006	0.086	<0.05	2.6	0.044	<0.005	<0.01	<0.01
	03/10/15	200.7/200.8	0.0047	0.14	<0.002	0.8	<0.006	0.5	<0.001	6.4	0.0024	<0.005	0.0013	0.028
	11/11/14	200.7/200.8	0.0013	0.074	<0.002	0.18	<0.006	1.4	<0.001	4.9	<0.001	<0.005	<0.001	<0.01
	06/03/14	200.7/200.8	0.021	0.32	<0.002	0.52	<0.006	0.025	<0.005	1.5	0.056	<0.005	<0.005	0.021
	03/10/14	200.7/200.8	<0.01	0.19	<0.002	0.71	<0.006	2.9	<0.01	3	0.051	<0.005	<0.01	0.11
	11/12/13	200.7/200.8	0.0097	0.34	<0.002	0.44	<0.006	0.08	<0.005	0.25	0.0078	<0.005	<0.005	0.019
	06/12/13	200.7/200.8	0.0063	0.56	<0.002	0.69	<0.006	0.049	<0.005	0.56	0.02	<0.005	<0.005	<0.01
	03/18/13	200.7/200.8	0.0063	0.45	<0.002	0.77	<0.006	0.047	0.0052	0.62	0.0056	<0.005	<0.001	<0.01
	11/28/12	200.7/200.8	0.01	0.51	<0.002	0.69	<0.006	0.055	<0.005	1	0.015	<0.005	<0.02	0.025
	08/21/12	200.7/200.8	0.0062	0.62	<0.002	0.46	<0.006	0.044	<0.005	1.2	<0.05	<0.005	<0.001	<0.01
	06/12/12	200.7/200.8	0.0051	0.59	<0.002	0.28	<0.006	0.062	<0.005	1.1	0.0092	<0.005	<0.005	0.011
	03/20/12	200.7/200.8	<0.005	0.42	<0.002	0.11	<0.006	0.9	<0.005	0.6	<0.005	<0.005	<0.005	0.035
	12/14/11	200.7/200.8	0.0035	0.31	<0.002	0.12	<0.006	0.21	<0.005	0.39	0.0018	<0.005	<0.001	<0.01
	09/26/11	200.7/200.8	0.0036	0.58	<0.002	0.11	<0.006	0.057	<0.005	0.55	0.0019	<0.005	<0.001	0.026
	06/15/11	200.7/200.8	0.016	0.11	<0.01	0.11	<0.03	1.2	<0.025	1.2	0.037	<0.025	<0.01	<0.05
	03/03/11	200.7/200.8	<0.005	0.48	<0.002	0.034	<0.006	0.11	<0.005	0.38	<0.05	<0.005	<0.005	<0.01
	11/11/10	6010B	<0.02	0.33	<0.002	0.046	<0.006	0.16	<0.005	0.59	<0.05	<0.005	<0.001	<0.05
	09/20/10	6010B	<0.02	0.31	<0.002	0.033	<0.006	0.14	<0.005	0.73	<0.05	<0.005	<0.005	<0.05
	03/18/10	6010B	<0.04	0.21	<0.004	0.22	<0.012	0.86	<0.01	2	<0.1	<0.01	<0.001	<0.1

8.10.2 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)

Dissolved Metals Analytical Result Summary

STANDARDS			PARAMETERS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.01	2	0.005	0.05	1	1	0.015	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL			0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.03	NE
NMED TAP WATER (JUNE 2019)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL TAP WATER (NOVEMBER 2019)			0.000052	3.8	0.0092	22	0.8	14	0.015	0.43	0.1	0.094	0.004	6
SAMPLE ID	DATE SAMPLED	METHOD												
West LDU ²	11/19/19	200.7/200.8	<0.005	0.063	<0.002	0.095	<0.006	45	<0.0005	19	<0.005	0.0061	0.00076	0.027
	08/22/19	200.7/200.8	0.00061	0.066	<0.002	0.11	<0.006	34	<0.0025	28	<0.005	0.0054	0.00062	0.0082
	05/28/19	200.7/200.8	0.00025	0.076	<0.002	0.16	<0.006	750	<0.0025	76	0.0004	<0.005	<0.0025	0.07
	04/09/19	200.7/200.8	<0.005	0.01	<0.002	0.66	<0.006	1400	<0.0025	81	<0.005	<0.005	<0.0025	0.039
	04/30/18	200.7/200.8	0.005	0.092	<0.002	0.68	<0.006	0.31	<0.0025	1.7	0.0075	0.0047	0.00058	0.04
	02/21/18	200.7/200.8	<0.005	0.086	<0.002	0.37	<0.006	0.19	<0.0025	1.6	<0.005	0.012	0.00097	0.04
	12/04/17	200.7/200.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	09/05/17	200.7/200.8	0.0044	0.11	<0.002	1.3	<0.006	26	<0.0005	9.3	0.0035	<0.005	0.00074	0.14
	06/02/17	200.7/200.8	0.0022	0.11	<0.002	0.33	<0.006	44	<0.0005	17	0.0017	0.0011	0.0023	0.052
	02/21/17	200.7/200.8	0.0068	0.22	<0.002	2.2	<0.006	0.59	<0.0025	2.6	0.0054	<0.005	NA	0.019
	11/17/16	200.7/200.8	0.004	0.24	<0.002	0.67	<0.006	0.17	<0.0005	0.51	0.0045	<0.005	0.00066	0.0045
	06/07/16	200.7/200.8	0.0051	0.43	<0.002	0.0013	<0.006	0.2	0.00043	0.54	0.003	<0.005	0.00034	0.01
	03/01/16	200.7/200.8	0.0066	0.29	<0.002	1.4	<0.006	0.13	<0.005	0.99	0.0073	<0.005	0.00082	0.0073
	10/29/15	200.7/200.8	0.0056	0.6	<0.002	1.2	<0.006	0.086	<0.005	0.79	0.0082	<0.005	<0.01	<0.01
	08/11/15	200.7/200.8	<0.05	0.41	<0.002	1.2	<0.006	0.21	<0.025	0.55	<0.05	<0.005	<0.025	<0.01
	03/10/15	200.7/200.8	0.0033	0.27	<0.002	0.66	<0.006	0.42	<0.005	1.3	0.0052	<0.005	<0.005	0.033
	09/11/14	200.7/200.8	<0.005	0.49	<0.002	0.27	<0.006	1.3	<0.01	0.64	<0.005	<0.005	<0.01	0.26
	06/03/14	200.7/200.8	<0.002	0.082	<0.002	0.043	<0.006	0.92	<0.001	1.9	0.0027	<0.005	0.0011	0.022
	03/10/14	200.7/200.8	<0.001	0.061	<0.002	0.11	<0.006	2.6	<0.001	3.6	0.0023	<0.005	<0.001	0.088
	11/12/13	200.7/200.8	0.01	0.17	<0.002	0.14	<0.006	0.093	<0.005	1.3	0.044	<0.005	<0.005	0.023
	09/05/13	200.7/200.8	0.0086	0.23	<0.002	0.28	<0.006	29	<0.005	2	0.015	<0.025	<0.005	0.35
	06/12/13	200.7/200.8	<0.01	0.22	<0.002	0.036	<0.006	0.19	<0.01	0.29	0.11	<0.005	<0.01	<0.01
	03/18/13	200.7/200.8	<0.005	0.13	<0.002	0.04	<0.006	0.07	<0.005	0.31	0.013	<0.005	<0.005	<0.01
	11/28/12	200.7/200.8	<0.005	0.16	<0.002	0.071	<0.006	0.38	<0.005	0.55	0.013	<0.005	<0.05	0.04
	08/21/12	200.7/200.8	0.002	0.38	<0.002	0.032	<0.006	0.15	<0.005	0.21	<0.05	<0.005	<0.001	0.014
	06/12/12	200.7/200.8	<0.005	0.35	<0.002	0.019	<0.006	0.09	<0.005	0.2	0.0075	<0.005	<0.005	<0.01
	03/20/12	200.7/200.8	0.0018	0.21	<0.002	0.013	<0.006	0.61	<0.005	0.22	0.0038	<0.005	<0.001	0.02
	12/14/11	200.7/200.8	0.0071	0.3	<0.002	0.066	<0.006	1.3	<0.005	0.31	<0.005	<0.005	<0.005	0.04
	09/26/11	200.7/200.8	0.0044	0.21	NL	0.067	<0.006	0.14	<0.005	0.86	0.0075	<0.005	<0.001	0.013
	06/15/11	200.7/200.8	0.013	0.61	<0.01	0.091	<0.03	0.33	<0.025	1.1	0.031	<0.025	<0.005	<0.05
	03/03/11	200.7/200.8	<0.005	0.46	<0.002	0.077	<0.006	2.1	<0.005	1.3	<0.05	<0.005	<0.005	0.012
	11/11/10	6010B	<0.02	0.56	<0.002	0.18	<0.006	0.22	<0.005	0.81	<0.05	<0.005	<0.001	<0.05
	09/20/10	6010B	<0.02	0.25	<0.002	0.062	<0.006	0.12	<0.005	0.81	<0.05	<0.005	<0.005	<0.05
	03/18/10	6010B	<01	0.16	<0.01	2.3	<0.03	3.2	<0.025	2.9	<0.25	<0.025	<0.001	<0.25

8.10.2 LEAK DETECTION UNITS (East LDU, West LDU, Oil Sump LDU)

Dissolved Metals Analytical Result Summary

STANDARDS			PARAMETERS											
			Arsenic (mg/L)	Barium (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
WQCC 20 NMAC 6.2.3103 (DECEMBER 2018)			0.01	2	0.005	0.05	1	1	0.015	0.2	0.05	0.05	0.03	10
40 CFR 141.62 MCL			0.01	2	0.005	0.1	1.3	NE	0.015	NE	0.05	NE	0.03	NE
NMED TAP WATER (JUNE 2019)			0.000855	3.28	0.00624	0.0057	0.7898	13.8	NE	2.02	0.0987	0.0812	0.0592	5.96
EPA RSL TAP WATER (NOVEMBER 2019)			0.000052	3.8	0.0092	22	0.8	14	0.015	0.43	0.1	0.094	0.004	6
SAMPLE ID	DATE SAMPLED	METHOD												
Oil Sump LDU ¹	06/12/13	200.7/200.8	<0.02	0.43	<0.002	0.11	<0.006	0.13	<0.02	1.2	0.074	<0.005	<0.02	<0.01
	03/18/13	200.7/200.8	0.011	0.29	<0.002	0.1	<0.006	0.15	<0.005	1.1	0.013	<0.005	<0.05	0.026
	11/28/12	200.7/200.8	0.014	0.32	<0.002	0.08	<0.006	0.37	<0.005	1.1	0.013	<0.005	<0.02	0.06
	08/21/12	200.7/200.8	0.011	0.4	<0.002	0.061	<0.006	0.19	<0.005	1.1	<0.05	<0.005	<0.001	0.015
	06/12/12	200.7/200.8	0.0095	0.35	<0.002	0.046	<0.006	0.51	<0.005	0.83	0.012	<0.005	<0.005	0.016
	03/20/12	200.7/200.8	0.007	0.23	<0.002	0.047	<0.006	0.33	<0.005	0.79	0.02	<0.005	<0.005	0.024
	12/14/11	200.7/200.8	0.0062	0.23	<0.002	0.03	<0.006	0.28	<0.005	0.35	0.011	<0.005	<0.001	0.015
	09/26/11	200.7/200.8	0.0062	0.24	<0.002	0.058	<0.006	0.1	<0.005	0.53	0.011	<0.005	<0.001	0.015
	06/15/11	200.7/200.8	0.0048	0.46	<0.01	0.033	<0.03	<0.1	<0.025	0.33	0.0041	<0.025	<0.002	<0.05
	03/03/11	200.7/200.8	<0.005	0.049	<0.002	0.054	<0.006	2.4	<0.005	0.75	0.071	<0.005	<0.005	0.01
	11/10/10	6010B	<0.02	0.19	<0.002	0.037	<0.006	0.15	0.0075	1.2	<0.05	<0.005	<0.001	<0.05
	09/20/10	6010B	<0.02	0.32	<0.002	0.03	<0.006	0.12	0.0056	1.1	<0.05	<0.005	<0.025	<0.05

DEFINITIONS

NA = Not analyzed; NE = Not established.

Bold and highlighted values represent values above the applicable standards

STANDARDS

WQCC 20 NMAC 6.2.3103 - Standards for Ground Water of 10,000 mg/l TDS Concentration or Less.

a) Human Health Standards; b) Other Standards for Domestic Water

40 CFR 141.62 Maximum Contaminant Levels for Inorganic Contaminants

NMED Risk Assessment Guidance for Investigations and Remediations Table A-1

EPA Regional Screening Level (RSL) Summary Table

NOTES

1) Oil Sump LDU - Dry - 2013 Third and fourth Quarters. 2014, 2015, 2016 and 2017 - dry.

2) West LDU - 2014 - fourth quarter - not enough water to collect samples (West bay out of service). 2015 - Second Quarter - not enough water to collect samples.

3) East LDU - No samples collected third quarter 2014.

**ATTACHMENT 4
REPLACEMENT PAGES**



Marathon Petroleum Company LP

Annual Groundwater Monitoring Report Gallup Refinery - 2019

Gallup Refinery
92 Giant Crossing Road
Gallup, NM 87301
(505) 722-3833

Revised July 30, 2021
Revised March 31, 2021
September 15, 2020



Annual Groundwater Monitoring Report 2019
92 Giant Crossing Road
Gallup, NM 87301



The MKTF wells are sampled quarterly. BTEX, MTBE, DRO, GRO, total and dissolved metals and several VOCs and SVOCs have been detected in many of the wells above the referenced standards. See Tables 8.17 through 8.17.5 (Section 8) for a complete list of constituents analyzed.

ADDITIONAL SITES MONITORED

Evaporation Ponds EP-1 through EP-12B

- Benzene was detected in evaporation ponds EP-2 and EP-12B. Concentrations above the applicable standard were detected in evaporation pond EP-2 in the first semi-annual sampling event. Toluene was detected at concentration levels below the applicable standard in evaporation pond EP-2. Ethylbenzene, total xylenes, and MTBE were not detected in the evaporation ponds.
- Concentrations of fluoride, chloride, and sulfate exceeded applicable standards in each evaporation pond. Nitrite concentrations exceeded the standard in evaporation ponds EP-6, EP-7, EP-8, EP-9, EP-11, and EP-12B.
- BOD concentrations exceeded the general requirement of the 20 NMAC 6.2.3103 (<30 mg/L) in each of the evaporation ponds except for EP-7, EP-8, and EP-11.
- COD concentrations exceeded the general requirement (<125 mg/L) in each of the ponds.
- E-Coli concentrations exceeded the applicable standard in EP-2, EP-3, EP-4, EP-12A, and EP-12B.
- Arsenic, iron, manganese, and selenium were detected in concentrations exceeding applicable standards in the ponds. Total silver was detected in the ponds but did not exceed the applicable standards.
- The volatile organic compound bromomethane was detected in EP-2 above the applicable standard.
- The semi-volatile organic compounds bis(2-ethylhexyl) phthalate, phenol, and 1,4-dioxane were detected in concentrations exceeding applicable standards in the evaporation ponds.
- Pesticides were not detected in the samples collected from EP-3, EP-12A, and EP-12B.

Outfall STP1 to EP-2

- Benzene, toluene, ethylbenzene, and total xylenes were detected. MTBE was not detected.
- DRO and GRO concentrations exceeded applicable standards. MRO was not detected.
- BOD and COD concentrations exceeded applicable standards.
- Acetone, 2-butanone, and carbon disulfide were detected in concentrations below applicable standards.
- Bromomethane was detected in STP1 to EP-2 above the applicable standards during the 4th quarter of 2019.
- Iron and manganese were detected in concentrations exceeding applicable standards.

ADDITIONAL APPLICABLE STANDARDS REQUIREMENTS

The Discharge Permit was rescinded by NM-OCD on February 15, 2012; however, Gallup is still required to continue with abatement of pollution of groundwater pursuant to 19.15.30 NMAC (Remediation), under Abatement Plan AP-111, with remediation activities already in place.

Annual Groundwater Monitoring Report 2019
92 Giant Crossing Road
Gallup, NM 87301



2.8 DEVIATIONS FROM WORK PLAN

During 2019, field activities were conducted in accordance with the Facility Wide Ground Water Monitoring Work Plan – Updates for 2019 with the following exceptions (Table 2.1 and Appendix D).

- Several monitoring well locations were not sampled due to SPH being detected or a sheen being identified during the monitoring period.
- Monitoring wells without sufficient water were not sampled during the monitoring period.
- MKTF-36 could not be located and was not sampled during 2019.
- OW-14, OW-30, OW-54, and OW-55 had dedicated recovery systems installed during the second half of 2019 and could not be sampled.
- The stabilization protocol for collecting samples described in Section 2.2 was not followed for several wells as shown in Appendix D, *Field Inspection Logs*.
- Monitoring wells gauging data during the December 2019 sampling event were lost and are not included in this report.

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1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 39701

CONDITIONS

Operator: Western Refining Southwest LLC 539 South Main Street Findlay, OH 45840	OGRID: 267595
	Action Number: 39701
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
jburdine	Accepted for Record Retention Purposes-Only	11/22/2022