CHANGE ORDER

OWNER	X
ENGINEER	☐
CONTRACTOR	☐
FIELD	☐
TMWA	☐

1001 E. NINTH STREET
POST OFFICE BOX 11130
RENO, NEVADA 89520
PHONE: (775) 328-2040
FAX: (775) 328-3699

PROJECT: (name, address) **STMWRF 2020 Expansion Project (GMP#2) Influent Pump and Screen Replacement Project**

CHANGE ORDER NO.: **003**

DATE: **May 10, 2021**

CONTRACT DATE: **11/25/2020**

TO CONTRACTOR: (name, address) ***MWH & KGW, a Joint Venture***
370 Interlocken Blvd, Suite 400
Broomfield, CO 80021

The scope of work and project cost are to be modified as follows:

Change Order No. 003 dated 5/10/21 – Site Dewatering

This change order includes the labor and materials for the CMAR to installation of fourteen (14) dewatering wells for future construction activities requiring excavations of approximately 15 feet deep. Scope of work includes, but is not limited to the construction, startup and operation of a new groundwater dewatering system. Additional details are included in the attached.

Amount: $ 762,994.23

The contract date will be increased by 0 day

Not valid until signed by the Owner and Contractor.

The original (Contract Sum) was	$	2,749,323.00
Net change by previously authorized Change Orders	$	688,353.40
The (Contract Sum) prior to this Change Order was	$	3,437,676.40
The (Contract Sum) will be (increased) by this Change Order in the amount of	$	762,994.23
The new Contract Sum including this Change Order will be	$	$4,200,670.63

The Contract Time will be (increased) by (0) days.

NOTE: This summary does not reflect changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive.

	Washoe County Community Services Department, Capital Projects
CONTRACTOR	OWNER
	1001 East 9th Street
Address	Address
	Reno, NV 89512
BY	BY
DATE	DATE

FORMS-CHGORDR 9/94

May 05, 2021 Sent via email to: msizelove@washoecounty.us

Megan Sizelove
Project Manager
Washoe County
1001 E Ninth Street
Reno, NV 89521

RE: South Truckee Meadows Water Reclamation Facility 2020 Expansion Project
GMP-2 Influent Pump and Screens Replacement Project
Contract No. WR860109 / PWP No. WA-2020-308
Change Proposal PCI-0028 Bioreactors 3&4 Dewatering

Dear Ms. Sizelove,

Attached for your review and action is a Change Proposal associated with the South Truckee Meadows Water Reclamation Facility (STMWRF) 2020 Expansion Project submitted by Construction Manager at Risk (CMAR), MWH&KGW, A Joint Venture. This Change Proposal is associated with CMAR's Potential Change Item No. 0028, Bioreactors 3&4 Dewatering. CMAR is submitting this Change Proposal per previous project discussions regarding imminent need for installation and drawdown of groundwater in advance of the forthcoming GMP03A scope of work for excavation and construction of slab on grade for the Bioreactors 3&4. This Change Proposal is submitted in accordance with the requirements of Article 11.09 of the Standard General Conditions of the Construction Contract for the above referenced project.

This Change Proposal and supporting data are accurate and complete, and the requested time and price adjustment is the entire adjustment to which CMAR is aware of, or believes, are entitled. For a detailed breakdown of costs, see attached change proposal cost summary and supporting documentation.

CMAR looks forward to Washoe County's written reply within 30 days. Please feel free to contact me directly at (720) 876-8775 if I can be of assistance in resolving this matter.

Respectfully,

Corey Maxfield

Corey Maxfield, Project Manager

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1. Scope of Work

The Change Proposal includes the scope of work for construction, startup and operation of a new groundwater dewatering system local to the proposed site of the future Bioreactors 3&4 facility as part of the STMWRF 2020 Expansion Project. Major components of work included in the dewatering system include:

- Construction of 14 each 40' deep x 24" diameter drilled holes filled with gravel pack surrounding 8" diameter commercially slotted well casing pipe. Each well will be outfitted with a 2" submersible dewatering pump and discharge piping with local control panel and isolating valves
- Installation of temporary power supply for dewatering system utilizing existing STMWRF Headworks facility electrical power supply feeding from MCC-HA
- Installation of temporary discharge piping and environmental controls to comply with regulatory permitting requirements including settling tanks, flowmeters, and BMP's at proposed discharge location upstream of Thomas Creek. Secondary discharge piping will also be routed to the existing effluent pump station wet well for groundwater discharge in excess of maximum allowable discharge under Nevada Department of Environmental Protection (NDEP) De Minimus Discharge Permit for groundwater discharge
- Operation of dewatering system for a 3-month duration (June – August 2021) including permit required water quality sampling and testing
- Procurement of additional pumps and installation of local dewatering sumps for forthcoming GMP03A structure excavation to maintain subgrade requirements during construction of Bioreactors 3&4 structural concrete scopes
- Third Party Survey of dewatering system well installation (monitoring and dewatering wells) and initial survey for monument to perform settlement monitoring of existing STMWRF facilities through August 2021
- Removal at completion of project need for temporary dewatering system including abandonment of temporary dewatering wells (to be completed at a future date to be determined in GMP04 scope)

2. Recommendation of Award

CMAR has prepared a detailed cost estimate for the above described scope of work, and has included supporting attachments for the basis of pricing. CMAR is recommending award of a lump sum contract price adjustment for Direct Cost of Work with applicable fees, bonds, insurance and contingencies and allowances as described below:

Item #	Description	Amount
1	Cost of Work	$269,167.05
2	CMAR Overhead	$18,841.69
3	CMAR Profit	$18,841.69
4	CMAR Payment & Performance Bonds	$2,362.75
5	CMAR Insurance	$2,638.91
6	Builder's Risk Insurance	$767.13
7	CMAR's Contingency	$6,600.00
8	Allowances	$443,775.00
	Total Amount of Change Proposal	**$762,994.23**

3. Contingencies and Allowances

The Change Proposal includes the proposed contingencies and allowances per Article 13.02 of the Standard General Conditions of the Construction Contract for the Project. Below is a summary of the proposed contingencies included within this Change Proposal:

CMAR Contingency includes, but is not limited to:

- Construction of additional local dewatering sumps to manage nuisance water to maintain proper subgrade requirements for construction of Bioreactors 3&4 structural concrete.
- Material and equipment costs that may vary from those in the estimate due to inflationary reasons and market conditions, particularly for discharge pumps and piping materials beyond the date of quoted material supply validity.
- Labor availability, skills, and productivity that may vary from that assumed.
- Weather impact which may affect productivity.
- Normal wage rate variability.
- Composite wage rates varying from those assumed due to crew make-up, market conditions, and labor availability.

CMAR Contingency specifically excludes:

- Major unexpected work stoppages (strikes, etc.)
- Changes in scope
- Unforeseen Conditions
- Disasters (hurricanes, tornados, etc.)
- Excessive, unexpected inflation
- Excessive, unexpected currency fluctuations
- Impacts due to COVID-19

Owner's Allowances includes the following specific items:

- Construction of 10 additional dewatering wells for a total of 24 dewatering wells.
- Water Quality Sampling/Testing and NDEP De Minimus Permit Renewal beyond August 2021
- Construction of dewatering system monitoring wells as defined within preliminary 90% design project specifications for dewatering (31 23 19.01 Part 3.04).
- Hourly charges for subcontract well drilling & installation for impacts noted within subcontract price proposal for production, rock drilling, and/or cave-in clauses. Any delay charges incurred and charged by drilling subcontractor, due to impacts caused by Owner, Engineer, and/or third party(s) shall also be reimbursable under this allowance.
- Third Party Survey for Well Establishment and Monument for Settlement Monitoring
- Hydrology Plan with recommended dewatering plan per DEW Hydrology
- Purchase by Washoe County of new backup generator equipment with automatic transfer switch.
- Subcontract Electrician in the event of power failure for transition to backup power source

4. Reference Documents

The following reference documents serve as the estimating basis:

Item	Date	Description
1	Apr. 23, 2021	STMWRF_Early_Pkg3A_Drawings_90PCT_QC_Client
2	Apr. 23, 2021	STMWRF_Early_Pkg3A_Specs_90PCT_QC_Client
3	Apr. 23, 2021	STMWRF_Early_Pkg3A_StdDetails_90PCT_QC_Client
4	Feb. 18, 2021	30% Schematic Design Report
5	Feb. 18, 2021	30% Specifications
6	Feb. 18, 2021	30% Design Drawings
7	Apr. 08, 2021	DEW Hydrology Proposal for Hydrogeological Consulting at STMWRF Plant Preliminary Dewatering Report
8	Apr. 02, 2021	WETLAB-Western Environmental Testing Laboratory Analytical Report
9	Apr. 23, 2021	CMAR Dewatering Plan / De Minimus Permit – Submittal #312319.01-003.001

5. Schedule

CMAR has previously prepared an integrated project design and construction schedule for the anticipated STMWRF 2020 Expansion Project 30% design cost estimate. This Change Proposal assumes that CMAR and Washoe County will enter into agreement for a contract change order to the existing STMWRF Expansion project GMP02 contract for the proposed scope of this Change Proposal, and likewise will enter into subsequent contract agreements for remaining Project scopes of work to construct the complete Bioreactors 3&4 facility expansion under future GMP proposals and contract adjustment(s). As such, **CMAR is proposing no change to the existing Project Final Completion date of September 05, 2021**. CMAR has included a proposed bid schedule showing procurement, submittal and construction activities associated with this scope of work and preliminary overlap with forecasted GMP03A, GMP03B and GMP04 scopes.

6. Assumptions

Since the complete project design is still in development, this Change Proposal has been developed with several assumptions regarding design details not yet available at this time. Below is a summary of some of the assumptions made for this Change Proposal:

- **Division 01 - General Requirements**
  - Washoe County will provide temporary power utility consumption costs free of charge to CMAR. CMAR will be responsible to make connections to these utilities and construct any new infrastructure required for connection to temporary dewatering systems.
  - CMAR's existing General Conditions staff and temporary field office facilities will oversee construction of the Bioreactors 3&4 Dewatering System concurrent with existing contracted scope of work for GMP02. As such, CMAR has excluded supervisory and project management personnel from this Change Proposal. Should the timing for this scope of work not align with completion of the current GMP02 scope of work, CMAR will require additional General Conditions for management of this scope of work. Costs for General Conditions personnel and associated expenses continuing

beyond the current GMP02 end date, are assumed to be negotiated and included in future GMP03A, GMP03B and/or GMP04 pricing proposals.
- Costs for contractor/CMAR quality control inspection and testing are included. Third party material testing, specialty inspections by local Authority Having Jurisdiction (AHJ), and Quality Assurance (QA) testing are provided by Washoe County / HDR.
- CMAR assumes Prevailing Wages (Davis Bacon wages) and fringes for use in estimating self-perform work scopes. Typical work week of 40 manhours per week assumed for labor resource setup.
- Sales tax is applicable to the project at local state and county rate of 8.27%. Sales tax is only applied to construction equipment and materials.
- CMAR has excluded costs for third party security, badging, and site-specific indoctrination and security training required by Washoe County.
- CMAR assumes access to site is unrestricted to the point of compliance with Washoe County on site policies.
- CMAR assumes a standard work week of 5 days per week (Monday – Friday) and a site availability daily of 12-14 hours. Weekend work and additional shifting as required is not assumed within estimated costs.
- CMAR assumes that if proposed dewatering system consisting of 14 each dewatering wells is insufficient to meet groundwater controls per proposed depth with respect to Bioreactors 3&4 subgrade elevations, then CMAR will not be responsible for any resultant schedule impacts to subsequent STMWRF 2020 Expansion Project scopes of work (i.e. GMP03A, GMP03B and/or GMP04 scopes). Any delays resulting from CMAR's performance, or lack thereof, to adequately dewater the Bioreactors 3&4 excavation site ahead of future contract scopes of work will be evaluated and submitted as separate Potential Change Issues.
- CMAR assumes that Survey is required by a Professional Land Surveyor for well establishment permit requirements to record the coordinates of dewatering and/or monitoring wells, as well as a monument for monitoring settlement of existing utilities and facilities during operation of dewatering systems constructed for this scope of work.

- **Division 02 – Existing Conditions**
  - Any costs from unknown subsurface conditions including hazardous material testing, removal and/or abatement, as well as impacts from archeological artifacts, are to be carried by the Washoe County and are not included in this Change Proposal.
  - CMAR assumes no existing structures, roadways, or other existing site infrastructure will require demolition and restoration as part of this scope of work. Any costs for demolition, restoration, or protection of existing facilities is excluded from this Change Proposal.
- **Division 26 – Electrical**
  - CMAR assumes availability of a 100 A 3-phase electrical service from the existing STMWRF Headworks electrical room, MCC-HA equipment will be provided to CMAR by Washoe County for use in powering the Bioreactors 3&4 Dewatering System. CMAR assumes this proposed power source is connected to the existing STMWRF backup power generator and connection of BNR3&4 dewatering system temporary power will not impact the performance of the plant's existing backup power generator, if required in the event of a power failure.
  - CMAR assumes that temporary SO cord will be suitable for use as conductor for temporary power system, and that CMAR can install temporary power cable within

direct buried PVC conduit material where required for routing from Headworks facility to local control panel(s) for dewatering pumps. No concrete encasement would be required for buried temporary power utilities. Buried utilities will be marked with warning tape and fiberglass markers until such time that they are removed from service.

- **Division 31 – Earthwork**
  - Dewatering plan is based upon the assumption that discharge to Thomas Creek will be acceptable. CMAR will install settling tank, flowmeter, and on-grade BMP's including filtration bags, straw bales, and/or silt fence to monitor flows, mitigate erosion and eliminate/control sediment discharge to Thomas Creek.
  - CMAR is applying for a De Minimus Dewatering Permit which is limited to 250 gpm to be discharged into a US Waterway. It is assumed that flows/volumes over 250 gpm can be discharged to existing STMWRF Effluent Pump Station Wet Well. If discharge to Wet Well is required, Washoe County will monitor and discharge of those flows in conjunction with ongoing operations for STMWRF facility and associated permits.
  - CMAR excludes costs for permits beyond those for NDEP De Minimus Discharge Permit. Any discharge for groundwater flows/volumes in excess of the De Minimus Discharge Permit maximum limit will be allowed to be placed within Washoe County's existing STMWRF Effluent Pump Station Wet Well and will be the responsibility of Washoe County for discharge in compliance with all applicable laws and regulations.
  - CMAR is applying for an Individual Permit through NDEP, which typically requires a six-to-nine-month process to obtain. This permit will allow discharge of additional volumes to Thomas Creek in excess of the 250 gpm allowed by the De Minimus Permit. Costs associated with the Individual Permit application are not included in this Change Proposal but will be submitted as a subsequent Change Proposal once the permit is issued. Until the Individual Permit is obtained, flows in excess of 250 gpm will be discharged into the STMWRF Effluent Pump Station Wet Well which will convey the water to the Huffaker Hills Effluent Reservoir.
  - CMAR assumes that dewatering pumps will be required to be operated for a period of nearly one year, however, could be required to remain in operation for longer. CMAR has only included costs for operation of temporary dewatering for Bioreactors 3&4, including equipment rental, through August 31, 2021. CMAR assumes that Washoe County will execute a contract change order, or new contract agreement, with CMAR for ongoing operation of dewatering systems beyond August 31, 2021, for such period that permanent facility construction requires dewatering system to remain in service.
  - CMAR has included provisions for rental of well screen piping (8" diameter), however, will seek to purchase well screen piping for potential reuse across the project and cost savings to the Project.
  - CMAR assumes that pumps purchased for use on the Project will be used for full period of BNR3&4 dewatering and upon completion of scope, will be turned over to Washoe County. CMAR makes no guarantees of pump condition at time of handover due to wear and tear from use on STMWRF 2020 Expansion Project.
- **Fees, Bonds and Insurance**
  - CMAR assumes that costs for Builder's Risk Insurance premium will be billed to Washoe County following receipt of actual invoiced amount.
  - CMAR assumes that any utilized Allowances and/or CMAR Contingencies will be invoiced for Cost of Work plus applicable CMAR Overhead and Profit at 14% markup,

plus bond and insurance at applicable percentage markups

- CMAR assumes Contingencies and Allowances if unused will carry forward to future GMP for the STMWRF 2020 Expansion project remaining scopes.

7. Exclusions / Exceptions

The following items are specifically excluded from this Change Proposal, or likewise, exceptions to the contract drawings and specifications are noted:

- CMAR specifically takes exception to, and this Change Proposal does not comply with, 90% GMP03A Project Technical Specification for Dewatering, 31 23 19.01 Part 3.03A. CMAR anticipates that groundwater will be lowered and maintained to a local depth of 12”-18” below bottom of concrete for Bioreactors 3&4 – not “a minimum of 5 feet below the lowest point of excavation”.
- CMAR specifically takes exception to, and this Change Proposal does not comply with, 90% GMP03A Project Technical Specification for Dewatering, 31 23 19.01 Part 3.03F. If required, Washoe County should direct CMAR to provide and utilize Owner’s Contingency for “100 percent emergency power backup with automatic startup and switchover in event of electrical power failure.”
- CMAR specifically excludes Monitoring Wells, and this Change Proposal does not comply with, 90% GMP03A Project Technical Specification for Dewatering, 31 23 19.01 Part 3.04. If required, Washoe County should direct CMAR to provide and utilize Owner’s Contingency for installation and monitoring of groundwater levels for well location, size/depth and quantity determined by Engineer.
- All Owner costs such as, but not limited to, pre-construction activities, management, and support of field construction activity.
- Removal of unforeseen underground obstructions
- Hazardous material identification, remediation and or disposal.
- Facility O&M costs
- Engineering Design Fees
- Rock excavation
- Geotechnical investigation beyond location of existing utilities
- Engineering support services during construction
- Overtime beyond assumed 40 hours/week

8. Attachments

- PCI-0028 Change Order Pricing Summary, Details and Risk Register
- Bid Schedule
- Supporting Subcontractor and Vendor Quotes
- CMAR Proposed Dewatering Plan

CHANGE ORDER ESTIMATE SUMMARY

PCI-0028, Bioreactors 3&4 Dewatering

OWNER: Washoe County
PROJECT: STMWRF 2020 Expansion
LOCATION: Reno, NV

PREPARED BY: Brett Henderson
DATE: May 5, 2021
MWH-KGW JV PROJECT #: 20014

Current Contract Final Completion	September 5, 2021
Proposed New Contract Final Completion	September 5, 2021
Schedule Extension (Calendar Days)	-

DIVISION	DESCRIPTION	HOURS	LABOR	MATERIAL	EQUIPMENT	SUBCONTRACT	OTHER DIRECT	TOTAL
DIV_01	GENERAL REQUIREMENTS	64	$ 6,672.00	$ -	$ -	$ -	$ 1,483.00	$ 8,155.00
DIV_02	EXISTING CONDITIONS	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_03	CONCRETE	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_04	MASONRY	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_05	METALS	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_06	WOODS, PLASTICS & COMPOSITES	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_07	THERMAL & MOISTURE PROTECTION	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_08	OPENINGS	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_09	FINISHES	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_10	SPECIALTIES	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_11	EQUIPMENT	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_12	FURNISHINGS	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_13	SPECIAL CONSTRUCTION	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_14	CONVEYING EQUIPMENT	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_21	FIRE SUPPRESSION	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_22	PLUMBING	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_23	HEATING, VENTILATION & AIR-CONDITIONING	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_26	ELECTRICAL	96	$ 6,483.73	$ 1,000.00	$ 635.28	$ 18,180.00	$ -	$ 26,299.01
DIV_27	COMMUNICATIONS	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_28	ELECTRONIC SAFETY AND SECURITY	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_31	EARTHWORK	304	$ 18,256.37	$ 104,036.93	$ 29,330.75	$ 71,924.25	$ -	$ 223,548.30
DIV_32	EXTERIOR IMPROVEMENTS	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_33	UTILITIES	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_35	WATERWAY AND MARINE CONSTRUCTION	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_40	PROCESS INTERCONNECTIONS	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_41	MATERIAL PROCESS & HANDLING EQUIPMENT	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_43	PROCESS GAS & LIQUID HANDLING, PURIFICATION AND STORAGE EQUIPMENT	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_44	POLLUTION AND WASTE CONTROL EQUIPMENT	0	$ -	$ -	$ -	$ -	$ -	$ -
DIV_46	WATER AND WASTEWATER EQUIPMENT	0	$ -	$ -	$ -	$ -	$ -	$ -
	SUBTOTAL COST	**464**	**$ 31,412.10**	**$ 105,036.93**	**$ 29,966.03**	**$ 90,104.25**	**$ 1,483.00**	**$ 258,002.31**
	PERCENTAGE OF SUBTOTAL COST		*12.18%*	*40.71%*	*11.61%*	*34.92%*	*0.57%*	*100.00%*
	OTHER DIRECT COST		**QUANTITY**	**RATE**			**OTHER DIRECT**	**TOTAL**
	SITE GENERAL CONDITIONS (CALENDAR DAYS)		-	0.00%			$ -	$ -
	SALES/USE TAX (% - MATERIALS & EQUIPMENT)		$ 135,002.96	8.27%			$ 11,164.74	$ 11,164.74
	SUBTOTAL OTHER DIRECT COST						**$ 11,164.74**	**$ 11,164.74**
	SUBTOTAL COST OF THE WORK		**$ 31,412.10**	**$ 105,036.93**	**$ 29,966.03**	**$ 90,104.25**	**$ 12,647.74**	**$ 269,167.05**

		QUANTITY	RATE			TOTAL
Item 1	**COST OF WORK**					**$ 269,167.05**
Item 2	**CMAR OVERHEAD**	**$ 269,167.05**	**7.00%**			**$ 18,841.69**
Item 3	**CMAR PROFIT**	**$ 269,167.05**	**7.00%**			**$ 18,841.69**
	SUBTOTAL COST OF THE WORK AND CMAR FEES					**$ 306,850.44**
Item 4	**CMAR PAYMENT & PERFORMANCE BONDS**	**$ 306,850.44**	**0.77%**			**$ 2,362.75**
Item 5	**CMAR INSURANCE**	**$ 306,850.44**	**0.86%**			**$ 2,638.91**
Item 6	**BUILDER'S RISK INSURANCE**	**$ 306,850.44**	**0.25%**			**$ 767.13**
	SUBTOTAL COST OF THE WORK, CMAR FEES, BONDS & INSURANCE					**$ 312,619.23**
Item 7	**CMAR CONTINGENCY**	**$ 6,600.00**		**2.11%**	**of Subtotal Amount**	**$ 6,600.00**
Item 8	**ALLOWANCES**	**$ 443,775.00**		**141.95%**	**of Subtotal Amount**	**$ 443,775.00**

TOTAL CHANGE ORDER ESTIMATE: $ 762,994.23

MWH&KGW
A JOINT VENTURE

South Truckee Meadows Water Reclamation Facility 2020 Expansion Project

PCI-0028, Bioreactors 3&4 Dewatering

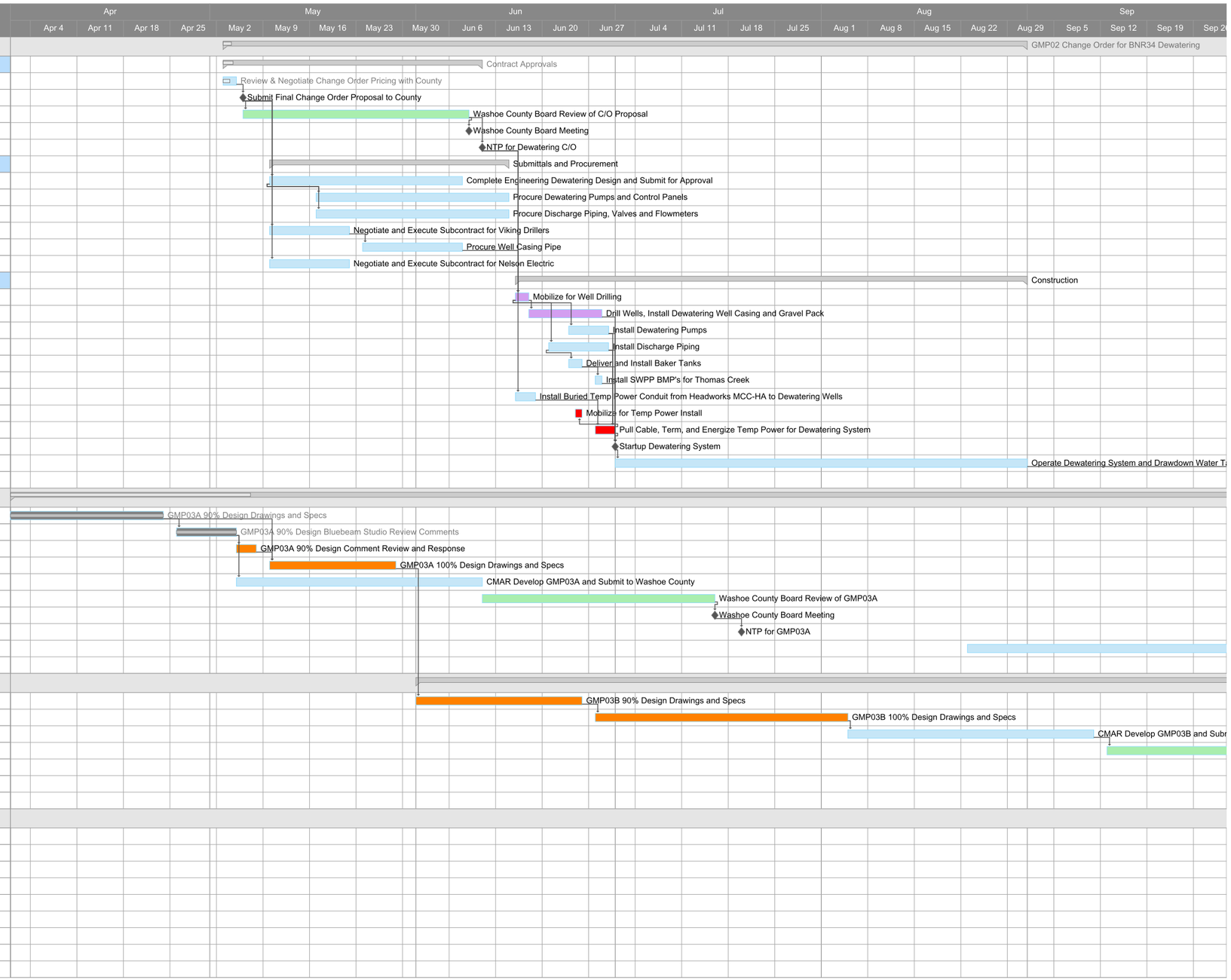
OWNER: Washoe County | **PREPARED BY:** Brett Henderson
PROJECT: STMWRF 2020 Expansion | **DATE:** May 5, 2021
LOCATION: Reno, NV | **MWHC JOB NO:** 20014

PHASE CODE	DESCRIPTION	QTY	UNIT	Productivity Rate MHR/UoM	Productivity Rate UoM/MHR	Manhours	LABOR RATE	LABOR TOTAL	MATERIALS UNIT PRICE	MATERIALS TOTAL	EQUIPMENT UNIT PRICE	EQUIPMENT TOTAL	SUBCONTRACT UNIT PRICE	SUBCONTRACT TOTAL	OTHER DIRECT COST UNIT PRICE	OTHER DIRECT COST TOTAL	TOTAL
GENERAL REQUIREMENTS																	
	Project Director - Dave Backman	0	HR				$ 198.00	$ -		$ -	$ 8.66	$ -		$ -	$ 1.00	$ -	$ -
	Project Manager - Corey Maxfield	0	HR				$ 198.00	$ -		$ -	$ 8.66	$ -		$ -	$ 1.00	$ -	$ -
	Central Project Engineer	40	HR	1	1	40	$ 90.00	$ 3,600.00		$ -	$ -	$ -		$ -	$ 1.00	$ 40.00	$ 3,640.00
	Estimator	24	HR	1	1	24	$ 128.00	$ 3,072.00		$ -	$ -	$ -		$ -	$ 1.00	$ 24.00	$ 3,096.00
								$ -		$ -		$ -		$ -		$ -	$ -
	Materials	1.0	LS					$ -		$ -		$ -		$ -		$ -	$ -
	Equipment	1.0	LS					$ -		$ -		$ -		$ -		$ -	$ -
	Subcontract	1.0	LS					$ -		$ -		$ -		$ -		$ -	$ -
	Other Direct Purchase - Wetlab Sampling Initial Discharge 2021 + DeMinimus Permit (Initial Permit + x1 each renewal July 2021)	1.0	LS					$ -		$ -		$ -		$ -	$ 1,419.00	$ 1,419.00	$ 1,419.00
DIV_01	**SUBTOTALS:**					**64.0**		**$ 6,672.00**		**$ -**		**$ -**		**$ -**		**$ 1,483.00**	**$ 8,155.00**
ELECTRICAL																	
	Temp Power Setup & Installation	1	LS				$ -	$ -		$ -		$ -	$ 18,180.00	$ 18,180.00		$ -	$ 18,180.00
	Sub Support for Temp Power Install	1	LS	96	0.010	96	$ 6,483.73	$ 6,483.73	$ 1,000.00	$ 1,000.00	$ 635.28	$ 635.28		$ -		$ -	$ 8,119.01
DIV_26	**SUBTOTALS:**					**96.0**		**$ 6,483.73**		**$ 1,000.00**		**$ 635.28**		**$ 18,180.00**		**$ -**	**$ 26,299.01**
EARTHWORK																	
	Drilling Sub (Viking Drillers) - Drill Wells (incl. orientation)	14	EA				$ -	$ -	$ -	$ -	$ -	$ -	$ 5,137.45	$ 71,924.25	$ -	$ -	$ 71,924.25
	Well Screen Rental (excl. tax) - June through August 2021	42	EA-MO				$ -	$ -	$ -	$ -	$ 109.68	$ 4,606.35	$ -	$ -	$ -	$ -	$ 4,606.35
	Purchase Dewatering Pumps & Control Panel	20	EA				$ -	$ -	$ 3,399.00	$ 67,980.00	$ -	$ -	$ -	$ -	$ -	$ -	$ 67,980.00
	Install Dewatering Pumps	14	EA	4	0.25	56	$ 272.36	$ 3,813.01	$ -	$ -	$ 207.28	$ 2,901.92	$ -	$ -	$ -	$ -	$ 6,714.93
	Purchase Dewatering Discharge Pipe & Fittings	1	LS				$ -	$ -	$ 31,056.93	$ 31,056.93	$ -	$ -	$ -	$ -	$ -	$ -	$ 31,056.93
	Install Discharge Piping	2500	LF	0.0896	11.161	224	$ 5.18	$ 12,945.37	$ -	$ -	$ 2.32	$ 5,803.84	$ -	$ -	$ -	$ -	$ 18,749.21
	Silt Tank Mobilization	1	LS				$ -	$ -	$ -	$ -	$ 1,200.00	$ 1,200.00	$ -	$ -	$ -	$ -	$ 1,200.00
	Silt (Baker) Tank Rental - June through August 2021	6	EA-MO				$ -	$ -	$ -	$ -	$ 1,155.20	$ 6,931.20	$ -	$ -	$ -	$ -	$ 6,931.20
	Purchase and Install Silt Fence / Straw Bale BMPs at Thomas Creek Discharge Point	1	LS	24	0.042	24	$ 1,497.99	$ 1,497.99	$ 5,000.00	$ 5,000.00	$ 537.44	$ 537.44	$ -	$ -	$ -	$ -	$ 7,035.43
	Purchase Sump Discharge Piping & Casing Materials	6	EA				$ -	$ -	$ -	$ -	$ 1,225.00	$ 7,350.00	$ -	$ -	$ -	$ -	$ 7,350.00
DIV_31	**SUBTOTALS:**					**304.0**		**$ 18,256.37**		**$ 104,036.93**		**$ 29,330.75**		**$ 71,924.25**		**$ -**	**$ 223,548.30**

Item #	Risk Description	Risk Owner	Risk Allocation	Probability	Impact	Total Risk Value	Risk Rating	Total Risk Cost	Probability Cost	Retained Risk Cost	CMAR Contingency	Allowances
01	Additional Dewatering Wells (~10 each)	Washoe County	Allowances	3	5	15	Very High	$ 324,000	$ 194,400	$ 200,000	$ -	$ 200,000
02	Additional Sump Excavation (50% Additional)	CMAR	CMAR Contingency	2	1	2	Low	$ 9,000	$ 3,600	$ 3,600	$ 3,600	$ -
03	Escalation on Dewatering Pumps and PVC Discharge Pipe Materials	CMAR	CMAR Contingency	3	1	3	Low	$ 5,000	$ 3,000	$ 3,000	$ 3,000	$ -
04	Water Quality Sampling, De Minimus Permits beyond August 2021	Washoe County	Allowances	5	1	5	Moderate	$ 2,500	$ 2,500	$ 2,500	$ -	$ 2,500
05	Construction of Dewatering System Monitoring Wells (4 Each)	Washoe County	Allowances	5	3	15	Very High	$ 56,000	$ 56,000	$ 56,000	$ -	$ 56,000
06	Well Drilling Cave-In (40 Hours @ Hourly Charge of $1275/HR + bond)	Washoe County	Allowances	5	2	10	Moderate	$ 52,275	$ 52,275	$ 52,275	$ -	$ 52,275
07	Third Party Survey (Well Establishment and Monument for Settlement Monitoring)	Washoe County	Allowances	5	1	5	Moderate	$ 6,000	$ 6,000	$ 6,000	$ -	$ 6,000
08	DEW Hydrology Dewatering Plan	Washoe County	Allowances	5	2	10	Moderate	$ 21,000	$ 21,000	$ 21,000	$ -	$ 21,000
09	Purchase New Backup Generator with ATS for Emergency Temp Power	Washoe County	Allowances	5	3	15	Very High	$ 100,000	$ 100,000	$ 100,000	$ -	$ 100,000
10	Emergency Subcontract Electrician for Temp Power Switchover	Washoe County	Allowances	3	2	6	Moderate	$ 10,000	$ 6,000	$ 6,000	$ -	$ 6,000
11						0			$ -	$ -	$ -	$ -
12						0			$ -	$ -	$ -	$ -
13						0			$ -	$ -	$ -	$ -
14						0			$ -	$ -	$ -	$ -
15						0			$ -	$ -	$ -	$ -
16						0			$ -	$ -	$ -	$ -
											$ 6,600	**$ 443,775**

STMWRF PCI-0028 Bid Schedule

	Task Name	Duration	Start	Finish
1	**GMP02 Change Order for BNR34 Dewatering**	85d	05/03/21	08/31/21
2	Contract Approvals	28d	05/03/21	06/10/21
3	Review & Negotiate Change Order Pricing with County	2d	05/03/21	05/04/21
4	Submit Final Change Order Proposal to County	0	05/05/21	05/05/21
5	Washoe County Board Review of C/O Proposal	23d	05/06/21	06/08/21
6	Washoe County Board Meeting	0	06/08/21	06/08/21
7	NTP for Dewatering C/O	0	06/10/21	06/10/21
8	Submittals and Procurement	25d	05/10/21	06/14/21
9	Complete Engineering Dewatering Design and Submit for Approval	20d	05/10/21	06/07/21
10	Procure Dewatering Pumps and Control Panels	20d	05/17/21	06/14/21
11	Procure Discharge Piping, Valves and Flowmeters	20d	05/17/21	06/14/21
12	Negotiate and Execute Subcontract for Viking Drillers	10d	05/10/21	05/21/21
13	Procure Well Casing Pipe	10d	05/24/21	06/07/21
14	Negotiate and Execute Subcontract for Nelson Electric	10d	05/10/21	05/21/21
15	Construction	54d	06/16/21	08/31/21
16	Mobilize for Well Drilling	2d	06/16/21	06/17/21
17	Drill Wells, Install Dewatering Well Casing and Gravel Pack	7d	06/18/21	06/28/21
18	Install Dewatering Pumps	4d	06/24/21	06/29/21
19	Install Discharge Piping	7d	06/21/21	06/29/21
20	Deliver and Install Baker Tanks	2d	06/24/21	06/25/21
21	Install SWPP BMP's for Thomas Creek	1d	06/28/21	06/28/21
22	Install Buried Temp Power Conduit from Headworks MCC-HA to Dewatering Wells	3d	06/16/21	06/18/21
23	Mobilize for Temp Power Install	1d	06/25/21	06/25/21
24	Pull Cable, Term, and Energize Temp Power for Dewatering System	3d	06/28/21	06/30/21
25	Startup Dewatering System	0	06/30/21	06/30/21
26	Operate Dewatering System and Drawdown Water Table	43d	07/01/21	08/31/21
27				
28	**GMP03A - BNR34 Excavation and Slab on Grade**	208d	04/01/21	01/26/22
29	~~GMP03A 90% Design Drawings and Specs~~	~~17d~~	~~04/01/21~~	~~04/23/21~~
30	~~GMP03A 90% Design Bluebeam Studio Review Comments~~	~~7d~~	~~04/26/21~~	~~05/04/21~~
31	GMP03A 90% Design Comment Review and Response	3d	05/05/21	05/07/21
32	GMP03A 100% Design Drawings and Specs	15d	05/10/21	05/28/21
33	CMAR Develop GMP03A and Submit to Washoe County	26d	05/05/21	06/10/21
34	Washoe County Board Review of GMP03A	24d	06/11/21	07/15/21
35	Washoe County Board Meeting	0	07/15/21	07/15/21
36	NTP for GMP03A	0	07/19/21	07/19/21
37	Construct GMP03A - BNR34 Scope	108d	08/23/21	01/26/22
38				
39	**GMP03B - BNR34 Structural Concrete, Metals and Backfill**	313d	06/01/21	08/19/22
40	GMP03B 90% Design Drawings and Specs	19d	06/01/21	06/25/21
41	GMP03B 100% Design Drawings and Specs	27d	06/28/21	08/04/21
42	CMAR Develop GMP03B and Submit to Washoe County	26d	08/05/21	09/10/21
43	Washoe County Board Review of GMP03B	25d	09/13/21	10/15/21
44	NTP for GMP03B	0	10/18/21	10/18/21
45	Construct GMP03B - BNR34 Scope	147d	01/27/22	08/19/22
46				
47	**GMP04 - Balance of Plant Expansion**	138d	03/04/22	09/13/22
48	Project 100% Design Drawings and Specs	0	03/04/22	03/04/22
49	Abandon BNR34 Dewatering Wells	5d	09/07/22	09/13/22
50				
51				
52				
53				
54				
55				
56				



PAC MACHINE CO., INC.

1246 GLENDALE AVE.
SPARKS, NV 89431-5916
(775) 359-8500 FAX: (775) 359-0818

QUOTE

DATE
4/16/2021

BILL TO:
KG WALTERS CONSTRUCTION
ATTN. BRAD SANDERS
bradsanders@kgwalters.com
775-677-7220

SHIP TO:
STMWRF
RENO, NV

P.O. NUMBER	TERMS	REP	SHIP	VIA	F.O.B.	PROJECT
	NET 30	CJS	TBD	TBD	SACTO, CA	BIOREACTOR

QUANTITY	DESCRIPTION	PRICE EACH	AMOUNT
	WELL POINT DEWATERING PUMPS:		
20	2" VPOWER MODEL V25134HH, 2.5HP, 460V 3PH, SUBMERSIBLE WELL PUMPS W/ 50' CABLE & MALE QUICK CONNECT PLUG	$2,850.00	$57,000.00
18	NEMA 3R CONTROL PANEL, 5 AMP, 460V 3PH W/ PLUG SET FOR QUICK CONNECT	$610.00	$10,980.00
	FOB SACRAMENTO, CA LEAD TIME: 3-4 WEEKS ARO		
	PLUS TAX & FREIGHT, SUBJECT TO AVAILABILITY		

	FREIGHT	T.B.D.
	SUBTOTAL	$67,980.00
	SALES TAX	
	LABOR	
	TOTAL	$67,980.00

QUOTATIONS ARE VALID FOR 30 DAYS.
PRICES ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION

WESTERN NEVADA SUPPLY
* * Q U O T A T I O N * *

TO: MWH CONSTRUCTORS INC.
"MWH/KGW STMWRF 2020 EXP"
8455 ALEXANDER LANE RD
RENO, NV 89521

JOB:STMWRF HEADWORKS PUMP & SCREEN

DATE: 04/22/21 NO. 936900
EFFECTIVE 04/22/21 TO 05/22/21

TERMS: NET 30 PAGE# 1
FOB: JOBSITE
PREP. BY: MATT CHICVARA
775-353-0266
mchicvara@goblueteam.com

** BRAD EMAILED LIST **

WE ARE PLEASED TO QUOTE YOU ON THE FOLLOWING MATERIAL
*** SALES TAX NOT INCLUDED ***

Qty	Part #	Description	Price.....	Extended
1	===> MATERIAL			
2500	IEZC000050	6 40 PVC/DWV PIPE BE	6.72	16800.00
4	IEZC114700	SPEA 6 S PVC 40 T	92.58	370.32
20	IEZC115000	SPEA 6 X 2 S 40 PVC T	92.58	1851.60
15	IEZC114104	SPEA 6 S PVC 40 90 ELL	58.93	883.95
4	IEZC113700	SPEA 6 S PVC 40 CAP	27.75	111.00
8	PEZC216484	SPEA 6 S 80 PVC VS FLG	34.01	272.08
8	WAZ1301049	6 X 1/8 FF SPPCO FLG GSKT 150	4.49	35.92
8	WJEPR00078	6 HDPE/DI ZINC B N SET	24.42	195.36
2	WZNS529668	TF 6 150# FLG PROPELLER MTR W/TO	2606.60	5213.20
1100	IEZC000030	2 40 PVC/DWV PIPE BE	1.38	1518.00
20	DASAH00210	ASAH 2 T21 1601 PVC 80 TU E BALL	73.15	1463.00
20	DASAH00386	ASAH 2 1210 PVC 80 TU E BALL CHK	94.85	1897.00
25	IEZC114090	SPEA 2 S PVC 40 90 ELL	2.84	71.00
20	IEZC113196	SPEA 2 MA PVC PVC 40 ADPT	1.82	36.40
15	IEZH130774	CHRI RED HOT BLUE GLUE QT	22.54	338.10
		SEGMENT 1 TOTAL		31,056.93
		QUOTATION TOTALS		31,056.93

*** CONTINUED ON NEXT PAGE ***

WESTERN NEVADA SUPPLY
* * Q U O T A T I O N * *

QUOTE#: 936900
DATE..: 04/22/21
JOB...: STMWRF HEADWORKS PUMP & SCREEN DEWATERING

Qty	Part #	Description	Price.....	Extended

* * * SALES TAX NOT INCLUDED * * *

THE MATERIAL LISTED ABOVE IS QUOTED PER THE PLANS AND SPECS PROVIDED TO WNS, AND WHETHER SPECIFIED OR NOT WILL BE SUBJECT TO THE ENGINEER’S APPROVAL. ALL SALES ARE SUBJECT TO TAX.

VIKING DRILLERS, INC.

Dewatering Systems

5950 Granite Lake Drive
Granite Bay, CA 95746
(916) 742-1500 • FAX (916) 772-3003
www.vikingdrillersinc.com

Contractors Licenses:
• CA #476668 • NV #34680 and #44407 • OR #188505 •

A Woman Owned Business

April 27, 2021

Corey Maxfield
MWH & KGW – A Joint Venture
370 Interlocken Blvd., Suite 400
Broomfield, CO 80021

RE: STMWRF Bioreactors 3 & 4 – Reno, NV

Dear Corey:

Per your request – Viking Drillers, Inc. submits the following pricing to drill, develop, and abandon 40' deep temporary dewatering wells based on two (2) separate plans.

- Option 1 – MWH & KGW Plan – 14 Temporary Dewatering Wells
- Option 2 – 55 Temporary Dewatering Wells

Viking will drill 24" diameter wells 40' deep, set 8" .032 commercially slotted casing, place a select filter pack and develop the wells. Upon completion of the job, Viking will pull the casings and abandon the wells, per NDWR requirements.

The above work will be performed for each plan for the following prices:

Option 1- MWH & KGW Plan

Viking will Drill, Develop and Abandon Fourteen (14) - 40'deep Temporary Dewatering Wells.....**$69,180.00**

(Above price does NOT include rent)

Rental Rate – Per 30 Days – MWH & KGW Plan

Rental for Fourteen (14) 40' Well Casings.....	**$ 1,400.00**
7% Surcharge for PVC pricing escalations.....	**$ 98.00**

Option 2

Viking will Drill, Develop and Abandon Fifty-Five (55) - 40'deep Temporary Dewatering Wells.....**$222,675.00**

(Above price does NOT include rent)

Rental Rate – Per 30 Days – Hydrologist Plan

Rental for Fifty-Five (55) 40' Well Casings.....	**$ 5,500.00**
7% Surcharge for PVC pricing escalations.....	**$ 385.00**

Initial_____

EITHER OPTION

The prices in this proposal are based on utilizing one (1) mob/demob, to perform all the work for either option. If additional mob/demobs are required, additional costs will be incurred.

If any equipment is returned with any damage, other than normal wear and tear, Viking will charge the contractor for all costs associated with restoring the equipment to its original condition at the commencement of rental.

If the contractor elects to revise the number of temporary dewatering wells utilized and/or modifies this proposal in any manner, Viking will submit revised prices, to compensate for any adjustment(s).

Drilling Holes for Shoring Beams

Per your request, Viking Drillers, Inc. will drill ***only*** 24" diameter holes by approximately 40' deep for your soldier beams.

Viking will perform the drilling for the soldier beam holes for the additional rates below:

Drill Only 24" Diameter Holes by approximately 40' Deep
Hourly + Materials.....**$ 675.00/Hour**

Subsistence for Two (2) Operating Engineers.....**$ 340.00/Day**

The price for drilling the soldier beam holes is based on performing the work on the same mob and demob as the well installation.

The hourly drilling proposal is subject to a four (4) hour minimum charge for any work performed between 0-4 hours and an eight (8) hour minimum charge for any work performed over 4 hours, per day.

This is a drill only price and does not contain provisions for any other work.

The above price is based on drilling the holes utilizing a standard "waterhead method". If a hole will not stand open, and Viking has to progress a steel casing to keep the hole open, we will continue to drill at the "Caving Clause" rate.

If circumstances dictate, the following respective rate(s) will *replace* the hourly rate quoted above, to perform the work.

Progress Clause:

If Viking cannot progress a hole down at the rate of 15 minutes per foot, we will proceed drilling for an hourly rate of **$975.00** per hour, plus material costs. Viking will also charge for any repair costs for damaged equipment.

Rock Clause:

If other than normal clay augers/buckets are required due to rock or other obstructions, we will continue to drill for an hourly rate of **$1,075.00** per hour, plus material costs. Viking will also charge for any repair costs for damaged equipment.

Initial_____

Drilling Holes for Shoring Beams Cont'd

Caving Clause:

The prices in this proposal for the wells and soldier beam holes are based on drilling the holes utilizing a standard "waterhead method". If a hole(s) will not stand open, and Viking has to progress a steel casing to keep the hole(s) open, we will continue to drill at an *additional* rate of **$1,275.00**, per hour, plus materials.

ADDITIONAL CHARGES

- An additional **$110.00** per hour, per man, for any safety meetings, classes, and drug testing required for/or to complete the job. Viking will also charge for any incidental charges related to these items.
- An additional **$35.00** per hour, per man, for any ***contractor requested*** overtime required to complete the job.
- Viking's bid is based on continuous drilling. If contractor does not provide all support outlined in this proposal, and Exhibit #1, pages 1 and 2, Viking will go on standby at an additional hourly rate of **$675.00** per hour.

CONTRACTOR'S RESPONSIBILITIES

Contractor will be responsible for and/or provide Viking with the following items, **along with items listed in attached Exhibit**:

1. Providing, installing, and removing all equipment for the wells. Pumps, electrical discharge piping, etc.
2. Layout of the holes for the wells and beams.
3. Provide and setting the beams and placing backfill material.
4. Well locations and Well GPS coordinates upon completion of the installation of the wells.
5. Nevada Engineered Stamped Dewatering Plan with Calculation and Operation Schedule.
6. Discharge and Settlement monitoring plan, reporting, and testing.
7. Installation and Removal and Abandonment of Monitoring Wells and Settlement Points.
8. Discharge and Drainage Encroachment Permits.
9. Material for backfilling for the soldier beam holes.
10. Washoe County well permits if required.
11. Vacuum out the top 10' of each well borehole prior to abandonment.
12. Concrete truck access to each well head location for abandonment
13. During the abandonment process **for the wells outside the excavation** the contractor will be responsible for off hauling and handling of displaced water that will contain a high PH content.

SPECIAL NOTES

- **This proposal is not based upon plans or specs and/or any applicable "Addendums", Viking only includes items described in this proposal. Viking excludes all other aspects.**
- **If a contract is issued and additional wells are needed, Viking will bill at a per well price. Time and material rates will not apply for additional wells.**
- **All prices quoted in this proposal are valid for 60 days only**

Initial_____

SPECIAL NOTES CONT'D

- **If wells have to be placed inside the excavation, additional charges will be incurred by MWH & KGW – A Joint Venture.**
- **SAFETY: Viking's 2021 EMR is .90**

Exhibit #2, pages 1 & 2 attached, sets forth the conditions of this quotation and must be included as an integral part of any purchase order or subcontract agreement issued to Viking to accomplish this work.

If the above proposal and Exhibit #2 meets with your approval please have an authorized representative of your company initial the bottom of each page, sign on the acceptance line and fax back to our office at (916) 772-3003 or email to sphilliber@vikingdrillersinc.com. Upon acceptance, we will put you on our schedule.

Authorized Representative_____Date_____

Printed Name of Representative_____Title_____

If we can be of further assistance, please contact us.

Respectfully,

Scott Philliber
Vice President
NV Lic #0034680

VIKING DRILLERS, INC.

DEWATERING
EXHIBIT #1

This proposal is subject to the inclusions of the following ***exclusions and/or contractor's responsibilities*** being incorporated into any Contract/Subcontract Agreement. These exclusions and/or contractor's responsibilities will control where there is any inconsistency between the terms of this proposal and any subsequent agreement.

1. Access and egress.
2. All required design/civil engineering, field engineering, surveying, and layout, including clearly marked centerlines, grade, offset stakes and elevation and maintenance of the same.
3. Location and protection of and from all utilities above, on and below the ground surface. If drilling is to be done within the USA easement, the contractor must expose the utility.
4. Removal of concrete, unusual or unnatural underground and/or surface/subsurface obstructions. Viking shall be reimbursed for any costs associated with any obstruction.
5. Control of all seepage, surface and runoff water.
6. A continuous water supply, a minimum of 50 g.p.m., for drilling at each drilling location, if required.
7. Acquisition, maintenance, and cost of all permits, including discharge permits, unless otherwise stated.
8. Relocating and disposal of spoils.
9. Disposal of water beyond onsite location.
10. Treatment of water, water testing/sampling, if required.
11. Place to store equipment.
12. A location onsite to accommodate the development of wells, placed within 100'of each well.
13. Power drop, as required.
14. Fuel and servicing of generators. Oil and fuel filters MUST be changed on a weekly basis. Oil MUST be changed weekly. The contractor will be charged for any repairs resulting from not servicing the generators.
15. Traffic and dust control.
16. Sealing of wells inside the slab area.
17. Backfilling of wells, pulled by Viking, outside the excavation.
18. Groundwater level readings, flow meter readings, and respective reports.
19. Sumping
20. Digging of ditches, burying and hanging and/or fastening of the discharge pipe and electrical. Exposing pipe and cord when Viking removes the dewatering system.
21. Operation and maintenance of the system. Contractor to call Viking if the system is down and we will respond. If the problem is due to the contractor's damage to the system, Viking will bill repairs to the contractor.
22. Bond premium 2.5% of the contract value.
23. Liquidated damages or consequential damages and any costs associated.
24. Licenses, except for Viking's State Contractor's License.
25. Jobsite Security
26. Warranty, the system is temporary.
27. Cleaning and/or decontaminating sand tanks, if required, before Viking removes the system. The contractor will be responsible for disposing of any material contained in tanks including but not limited to contaminants.
28. Removal/disposal of the remaining well filter pack (gravel) that is left over from the dewatering operation.
29. Viking excludes the preparation and submittals of SWPP Plan and a Water Control Plan, and any permits associated with the plan.

_____Initial

VIKING DRILLERS, INC.

DEWATERING CONT'D
EXHIBIT #1 – Page 2

This proposal is subject to the inclusions of the following ***conditions*** being incorporated into any Contract/Subcontract Agreement. These conditions will control where there is any inconsistency between the terms of this proposal and any subsequent agreement.

1. Indemnification: Contractor shall indemnify and save harmless Viking Drillers, Inc. (including its officers, agents, employees, successors, and assigns) from any and all claims, demands, causes of action, damages, costs, expenses, losses or liability in law or in equity of every kind and nature whatsoever ("Claims") arising out of or in connection with its operations to be performed under this Agreement, including but not limited to personal injury or death to persons, including but not limited to, any employees or agents of contractor or any other subcontractor and/or damage to property of anyone (including loss of use thereof) caused or alleged to be caused, in whole or in part, by any negligent act or omission of Viking or anyone directly or indirectly employed by Viking or anyone for whose acts may be liable. Contractor, however, shall not be obligated under this agreement to indemnify Viking for claims arising from the active negligence or willful misconduct of Viking, its agents, or employees.

2. The quoted price is based on one mobilization and one demobilization unless otherwise stated.

3. Subsidence: The possibility of subsidence occurring on this project property and/or adjacent properties during or subsequent to dewatering operations is impossible to predict. The contract price does not include any allowance for claims liabilities and increased project costs arising from subsidence. Accordingly, Contractor hereby agrees to indemnify and hold Viking Drillers, Inc. harmless from any and all liability, loss, claims, demands and costs, including attorneys fees and applicable interest, rising from any subsidence and/or earth movement occurring or alleged to have occurred by reasons of Viking's dewatering activities covered by this proposal and/or contract unless such was occasioned by the active negligence or willful misconduct of Viking Drillers, Inc.

4. Hazardous/Toxic Substance: Contractor hereby agrees to indemnify and hold Viking Drillers, Inc. harmless from any and all liability arising from any contact with hazardous substance in connection with the work covered by this proposal and/or contract except only for liability arising from Viking's active negligence or willful misconduct.

5. Viking does not guarantee the job to be dry. Sumping may be required by the contractor.

6. Retention, if withheld, will be paid within 30 days after completing dewatering operation. Retention will *not* be withheld on the rental of equipment.

7. All requests for additional work or notification of stop rentals must be submitted in writing.

8. Contractor agrees to pay all costs arising out of use or operation of said equipment, including all sales and use taxes applicable to the rental of said equipment. Contractor agrees to pay the full replacement cost for Viking's rental equipment for all losses and damages from malicious mischief, fire, theft, flood, explosion, or other causes during the life of the job.

9. Should litigation become necessary to enforce or interpret the terms of this agreement, the prevailing party shall be entitled to recover their attorney's fees and costs incurred therein.

10. OCIP/CCIP – Viking will not give credit for enrollment under; (1) General Liability, due to the fact that Viking Drillers, Inc. has a 100% fully earned premium. (2) Umbrella Policy is a "Flat Rate Policy". Thus Viking will receive no return for excluding wrap-ups or any like products. Additionally, Viking Drillers, Inc. will participate in the program with the assumption there are adequate limits of liability being provided, and there are no erroneous exclusions within the policy such as subsidence exclusions.

11. Rental–3 weeks constitute a month for the first 30 days of rental. After the first 30 days, the rental will be prorated daily. Both parties to this proposal and/or contract recognize that this is a short term rental agreement and all obligations contained that extend beyond the rental time shall terminate when the equipment is moved from the project.

_____Initial

NELSON ELECTRIC CO., INC.

COMMERCIAL RESIDENTIAL INDUSTRIAL

1410 Freeport Blvd. Nev. License 016697
Sparks, Nevada 89431 Cal. License 322768
Phone (775) 358-0643 FAX (775) 358-0674

Date: Tuesday, April 27, 2021

Project: STMWRF Reactor Basin #3 & #4 Temporary Dewatering Electrical

Bid Date: 4/27/2021
Bid Time: 2:00PM

Scope: Electrical work to provide temporary power to the FBO Dewatering Pumps on Reactor Basin #3 & #4.

Addenda: We do not acknowledge any addenda.

Clarifications:

1. Proposal is based on providing temporary power for up to twenty FBO 2.5HP dewatering pumps.
2. Proposal is based on providing a 100A 480V feeder from MCC-HA to a 100A N3R 480V MLO Panelboard with four 30A 3 pole branch breakers. Feeder and branch cabling are figured as SO cord and no raceways are included in this proposal (Physical protection if required is by others).

Exclusions:

1. Excavation and backfill.
2. T support for hanging/supporting the pump controller.
3. Pumps, Pump controller/disconnect and cord & plug connectors for pumps (On the RSWRF project the FBO pumps & controllers were provided with plugs).
4. New raceways for the temporary SO cord.
5. Cutting, patching and painting.
6. Painting of electrical conduit, cabinets, and enclosures.
7. Core drilling, concrete / asphalt sawing and patching.
8. Trash dumpster and fees.
9. Bond and bond fees (1%).
10. Permit and permit fees.
11. Utility fees and charges.
12. Overtime.
13. Lead / asbestos abatement and monitoring.

Electrical Base Bid. $ 18,000.00

WETLAB

WESTERN ENVIRONMENTAL TESTING LABORATORY

Quotation for Analytical Services

Date:	03/19/21	**Quote No.:**	MWHC03192021	
Contact Person:	Corey Maxfield			**Matrix**
Client:	MWH & KGM			DW = drinking water
Street Address:	8001 Arista Pl, Suite #500			GW = groundwater
City, State, Zip:	Broomfield, CO 80021			HW = hazardous waste
Telephone:	(720)876-8775			SL = sludge
Email:	corey.maxfield@mwhconstructors.com			SO = soil
Project Name:	STMWRF 2020 - 21030580			SW = surface water
WET Lab Contact:	Logan Greenwood	**Phone:**	(775) 355-0202	WW = wastewater

Requested Parameters	Method	Matrix	Quantity	Unit Price	Total Price
In House Analytical					
ANIONS (Fluoride and Sulfate)	EPA 300.0	AQ	1	$36.00	$36.00
Dissolved Oxygen	SM 4500-O G	AQ	1	$16.00	$16.00
Fecal Coliform	Quant/Colilert-18	AQ	1	$36.00	$36.00
Hardness	Calc.	AQ	1	$0.00	$0.00
Mercury	EPA 245.1	AQ	1	$36.00	$36.00
ICP Scan (Metals Analysis + Digestion)	Misc.	AQ	1	$216.00	$216.00
Nitrate+Nitrite	EPA 353.2	AQ	1	$24.00	$24.00
pH	SM 4500-H+ B	AQ	1	$12.00	$12.00
Quantitray	SM 9223B	AQ	1	$36.00	$36.00
Residual Chlorine	Hach 8167	AQ	1	$30.00	$30.00
Sulfur	EPA 200.7	AQ	1	$54.00	$54.00
Metals Digestion for Sulfur	EPA 200.2	AQ	1	$18.00	$18.00
TKN	EPA 351.2	AQ	1	$48.00	$48.00
Total Dissolved Solids	SM 2540C	AQ	1	$18.00	$18.00
Total Nitrogen	Calc.	AQ	1	$0.00	$0.00
Total Phosphorus	SM 4500-P E	AQ	1	$24.00	$24.00
Total Suspended Solids	SM 2540D	AQ	1	$18.00	$18.00
TPH-Extractable (with Prep)	EPA 8015B	AQ	1	$91.00	$91.00
TPH-Purgeable (with Prep)	EPA 8015B	AQ	1	$91.00	$91.00
Turbidity	EPA 180.1	AQ	1	$18.00	$18.00
Subcontracted Analytical					
Volatile Organic Compounds[1]	EPA 8260	AQ	1	$162.00	$162.00

Subtotal:		$984.00
Administration Fee:	**$25 Per Report**	$25.00
Total Analytical Cost:		**$1,009.00**

WET Lab Client Services	
Sample Containers & Coolers	No charge
CoC Forms,Seals & Labels	No charge
Sampling Instructions	No charge
Preservatives	No charge
Standard Level QA/QC	No charge
Sample Disposal	No charge

475 E Greg St, #119, Sparks, NV 89431
775-355-0202 TEL 775-355-0817 FAX

WETLAB

WESTERN ENVIRONMENTAL TESTING LABORATORY

Summary of Services

Turnaround Time: Standard **Shipped Via:**
Sample Arrival Date: **Quote Expires:** 12/31/21

Verbal Results: Standard turn-around time is 10 working days from date of sample receipt.

Hardcopy Report: Standard turn-around time is 15 working days from date of sample receipt.

RUSH Analyses: Must be scheduled with the laboratory prior to sample submittal.

Reporting:

WET Lab maintains a policy of performing substantial quality control with all analyses. Duplicate sample analysis (10%), method blanks (matrix dependent), surrogate spike analysis (when applicable), and continuing calibration procedures as part of the methodologies performed routinely.

The report will include the Laboratory and Client ID, parameter, method reference and analytical results with units.

COMMENTS:

Rush Schedule (% Surcharge): *5-Day RUSH = 25%, 3-Day RUSH = 50%, 2 day RUSH = 100%, 1 Day RUSH = 200%*

[1]Volatile Organic Compounds to be subcontracted to Eurofins Cal Science out of Garden Grove, CA.

Terms:

Terms are 30 days from date of invoice. All discounts are void if payment is not received by WETLAB within that period. Payment for services is expected at the time of submission, unless an account has been established.

AUTHORIZATION TO PROCEED AS QUOTED AND AGREE TO WETLAB TERMS & CONDITIONS

NAME:_____

COMPANY:_____

WETLAB Acceptance:_____

475 E Greg St, #119, Sparks, NV 89431
775-355-0202 TEL 775-355-0817 FAX

NEVADA DIVISION OF
ENVIRONMENTAL
PROTECTION

ePayment

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Your Application Fee payment has been successfully processed!

PLEASE PRINT AND RETAIN THIS CONFIRMATION FOR YOUR RECORDS!

Company Name:	Mwh&Kgw, A Joint Venture
Company Address:	7996 S Titus Ct Aurora CO 80016
Contact First Name:	Corey
Contact Last Name:	Maxfield
Telephone:	(720) 876-8775
Payment Type:	Application Fee
Permit No:	NVG201000
Site ID:	DDP-48831
Confirmation E-mail:	corey.maxfield@mwhconstructors.com
Today's Date:	4/23/2021
Confirmation Number:	619201872011670400 3265
Settlement Date:	4/23/2021
Payment Amount:	$200.00
Service Fee:	$5.00
Total Amount:	$205.00

Main Menu

DEW Hydrology

Mr. Corey Maxfield
MWH-KGW

April 8, 2021

RE: Proposal for Hydrogeological Consulting for Dewatering at South Truckee Meadows Water Reclamation Plant

Dear Corey.
DEW Hydrology is presenting our proposal for hydrogeological consulting for dewatering the area planned for expanding the South Truckee Meadows Water Reclamation Plant at 8500 Alexander Road in Reno, NV. The objectives of this study are to (1) determine the number of dewatering wells needed to lower the water table below the depth of the planned excavations; (2) select locations for these wells; (3) determine the depth and diameter of the wells; (4) estimate the pumping rate of the wells; (5) estimate the time needed to lower the water table to a suitable depth to permit construction of the facilities; and (6) prepare a report to be submitted to the Nevada Department of Environmental Protection (NDEP) to obtain needed permits. The tasks needed to complete this project and the anticipated budget are presented below.

- Literature Review: Review the geotechnical documents provide by MWH-KGW and any other reports pertinent to the project site to learn the soil and groundwater characteristics of the area.

- Site Visit: Conduct a site visit to acquaint ourselves with the site and the natural and man-made features that could affect dewatering.

- Groundwater Modeling: Set up a groundwater model of the site based on the information available. This model will allow us to select the number and the locations for dewatering wells. This model can be adjusted so we can analyze various configurations to determine the most cost-effective wellfield for the site. As more information becomes available during the early portions of the dewatering project, the model can be adjusted to take this information into account and improve the accuracy for dewatering different structures later in the project.

- Report Preparation: Based on the results of the modeling, prepare a report for MWH-KGW and NDEP. This report will present the proposed dewatering well layout, the estimated pumping rates, the estimated time to draw the water level down to a suitable depth, and the assumptions, methods, and data used to obtain these estimates. It will include relevant maps, figures, calculations and model output to support the findings. We will respond to comments from NDEP.

- Meetings: Meetings (in person, by phone or visual conference) will be held with MWH-KGW to discuss aspects of the project, progress on the modeling, and other issues that arise. If

10180 Grizzly Hill Court
Reno, NV 89521

775-815-2293

necessary, we will meet with NDEP to review the model and report. For purposes of this proposal, we will assume 3 meetings in addition to the one meeting and site visit already completed.

The total estimated budget is $21,000. We will not exceed this amount without prior written approval from you. If any additional work becomes necessary to complete the project, we will complete them on a time and materials basis. Please contact us at (775) 815-2293 or by email at westhoff4hydro@gmail.com if you have any questions. Thank you for the opportunity to assist you on this project.

Regards
DEW Hydrology

David Westhoff

David Westhoff, P.E.
Principal Hydrologist

10180 Grizzly Hill Court
Reno, NV 89521

775-815-2293

1.0 EXECUTIVE SUMMARY

1.1 Purpose: The purpose of this study was to build a groundwater model, for the area surrounding the South Truckee Meadows Water Reclamation Facility. This model would be used as a guide in dewatering the local saturated alluvium to a depth of 20 feet below ground surface, which is five feet below bottom of excavation (BOE). At the proposed site (bioreactors 3 and 4) the surface elevation is 4,439 feet; the static water level is 4,431 feet; and the target elevation below BOE is 4,419 feet. The result of this task was the development of a single-layer groundwater flow model. A summary of the findings and recommendations are contained within this Executive Summary and additional details are contained in the body of this report.

1.2 Findings

- Model projections show that the groundwater in the footprint area of the bioreactors 3 and 4 can be dewatered to the required depth of 20 feet below ground surface.
- Dewatering of the footprint area can be accomplished through the construction and installation of 55 small diameter wells each equipped with pumps capable of producing approximately 20 gallons per minute (gpm).
- The amount of water produced from the wells during the proposed construction period of August 2021 till June 2022 (300 days) is estimated to be 475,200,000 gallons. Of this total amount approximately 119,520,000 gallons will be discharged to Thomas Creek Marsh area.
- During the total dewatering period, the remaining water (355,680,000 gallons) will be pumped to the existing South Truckee Meadows Water Reclamation Facility Reservoir.

1.3 Recommendations

- The wells covering the bioreactors 3 and 4 footprint area should be completed as follows:
    - Each well should be drilled to a depth of approximately 40 feet below land surface.
    - The wells should be spaced approximately 15 to 17 feet apart.
    - The diameter of the borehole should be approximately 10-inches.
    - The well casing shall consist of PVC casing either 5 or 6-inches in diameter.
    - It is recommended that the wells be screened from 10 feet below land surface to total depth.
    - The screen slot size should be 50-slot (0.05-inch).
    - The gravel/sand pack contained in the annular space from total depth to the surface seal should be No. 6 – No. 8, well-rounded quality gravel/sand pack.
    - Each well should be equipped with a pump capable of producing approximately 20 gpm.
    - The pumps should be placed at a depth approximately three feet above the casing's total depth.

2.0 INTRODUCTION

This report presents the results of a groundwater flow model that was developed for the South Truckee Meadows Water Reclamation Facility. The model was used as a guide to dewater the groundwater contained within the (bioreactors 3 and 4) footprint area. The South Truckee Meadows Water Reclamation Facility is located approximately three miles south-southeast of the Reno-Tahoe Airport, and nestled against the south side of the Huffaker Hills. A regional map is the area is shown in Figure 1, while a local map showing the facilities is shown in Figure 2.

Prior to building the groundwater model, which was used for making the dewatering projections, a review of available reports and geologic logs for the facilities site was completed. This information allowed the model to be built with the understanding that the geology for the modeled area was going to contain alluvium comprised of silts, fine sands, and clays.

The dewatering efforts were driven by the construction time schedule, which required that the footprint area to be dewatered to an elevation of 4,419 feet (approximately 20 feet below land surface) by start of construction August 2021.

Figure 1 Regional Map

Figure 2 Local Map

3.0 GEOLOGIC/HYDROGEOLOGIC SETTING

Nearly all of the geologic material within the modeled area consisted of alluvial deposits from the Mt. Rose Fan area. These deposits were composed of fine-grained sands; silty sands; silts; and clays. During the initial borehole drilling conducted by Newfields Mining Design & Technical Services, Sparks, Nevada in December 2020, nine borehole were drilled to recorded depths of 65.5 feet. Logs of the boreholes are included in Appendix A, along with a map showing the location of the boreholes. To the east and west of the modeled area the geologic material is comprised of the Kate Peak Formation. The Kate Peak formation is comprised of thick sequences of flow breccias, tuffs, volcanic sandstone and conglomerate. Where this formation contains fractures groundwater can be derived. However, in the area of the South Truckee Meadows Water Reclamation Facilities, both east and west of the modeled area, the formation is consolidated and for modeling purposes did not produce groundwater.

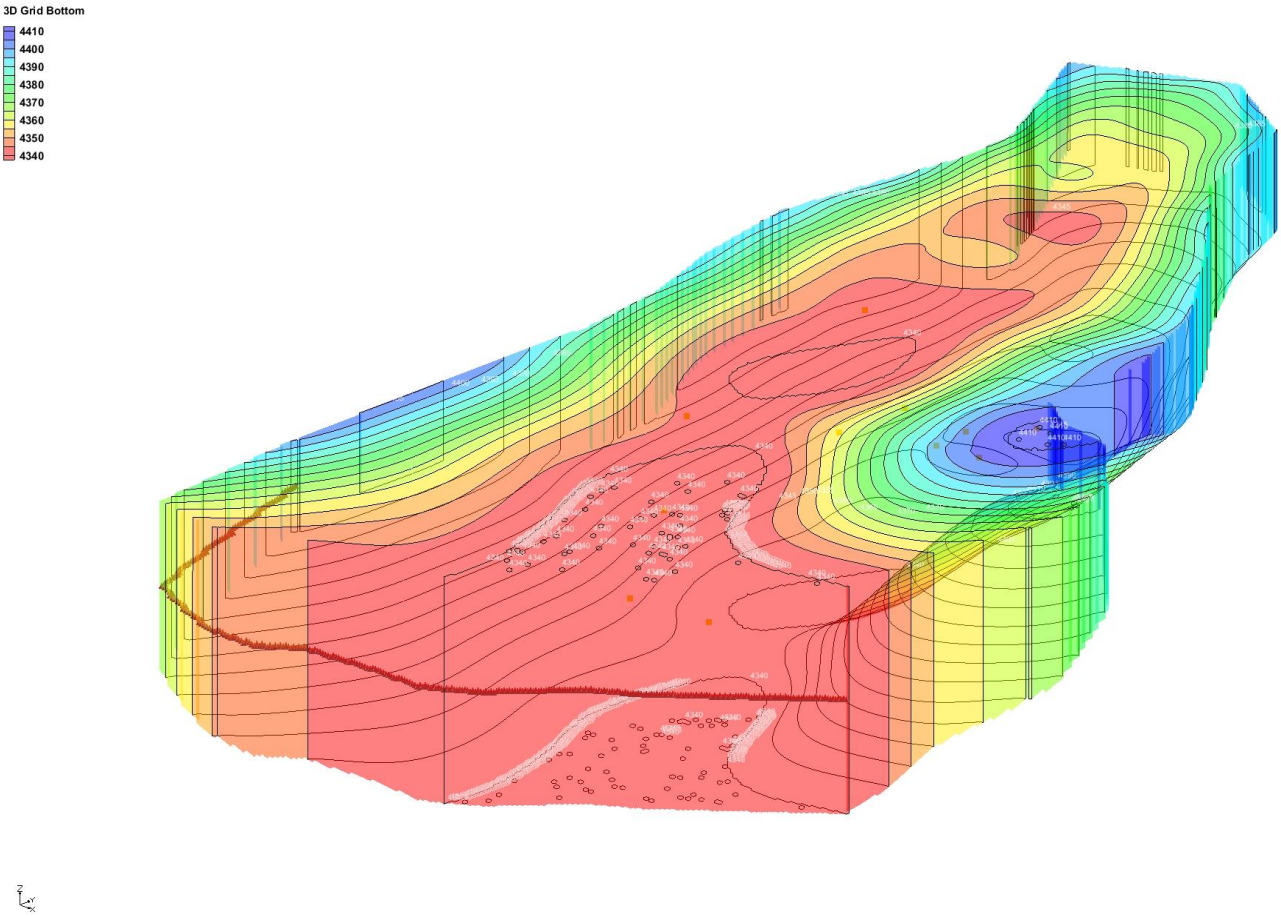
In summary, after reviewing the borehole logs, nearly all of the logs show sequences where the geologic material contains high amounts of clay. With the material containing these high amounts of clay, dewatering the material within the bioreactor footprint to a depth of 4,419 feet (elevation) will be a challenge.

Figure 3 shows the bottom elevation contours of the geologic material that is being modeled. These contours were developed utilizing a digital elevation map (DEM) and the recorded depth of the alluvial material at several locations within the modeled area. After placing the elevation and alluvial material depths data into the modeling software, the software developed the contour lines.

Figure 3 Bottom of Model Elevation Contours

Figure 4 shows the same elevation contours as Figure 3, but in a three-dimensional view. The east and west contacts of the model are where the alluvial material is in contact with the Kate Peak Formation. To the North, the model is truncated at the base of the dam and the facilities water reclamation reservoir.

Figure 4 Three-Dimensional View of Bottom of Model Elevation Contours



4.0 GROUNDWATER FLOW MODEL

A finite-difference groundwater flow model was constructed with MODFLOW (McDonald and Harbaugh, 1988) using the GMS graphical user interface. Figure 5 shows the outline of the model along with its boundary conditions. The western, northern, and eastern boundaries were assigned no-flow conditions. This means that the model assumes that no groundwater is entering the modeled area from these areas. To the south of the modeled area a General Head Boundary was assigned. This condition means that water enters and leaves each of the models cell (5 x 5 ft.) at a rate of flow proportional to the difference between the Boundary Head and the head in the cell. The conductance is the factor that relates the difference in the head to the rate of flow.

As this model is set up, all of the groundwater flow into the model is through the General Head Boundary, which borders the Thomas Creek marsh that is located adjacent to the model. Figure 5 shows all of the boundary conditions and location of the existing and proposed dewatering wells. Also shown are the general locations of future dewatering wells.

Figure 5 Boundary Conditions and Well Location Map

As constructed, the model is a single-layered model with 53,667 cells. Each cell measured 5 x 5 feet. Initially the model contained aquifer parameters of a hydraulic conductivity of 2.25; a specific storage of 0.3; and a specific yield of 0.23. Final values after over 50 modeling runs the parameters were modified to be hydraulic conductivity 0.8; specific storage 0.9; and specific yield 0.9. Using these values the target depth at the monitoring well was reached at approximately 30 days of pumping the 55 dewatering wells.

5.0 MODEL PROJECTIONS

The following figures show the locations of the required number of dewatering wells to lower the groundwater level to an elevation of 4,419 feet. For modeling purposes a monitoring wells was placed in the center of the proposed bioreactors 3 and 4 foot print area. This monitoring well was used as the target location for lowering the water level to the required depth. Throughout the modeled area, the static water level has been measured at approximately 8 to 9 feet below land surface. In most areas, this requires the water level to be lowered by 12 feet to reach the 4,419-foot elevation.

Figure 6 shows the model boundary, initial water level contours, and the location of the 55 dewatering wells.

Figure 6 Initial water level contours

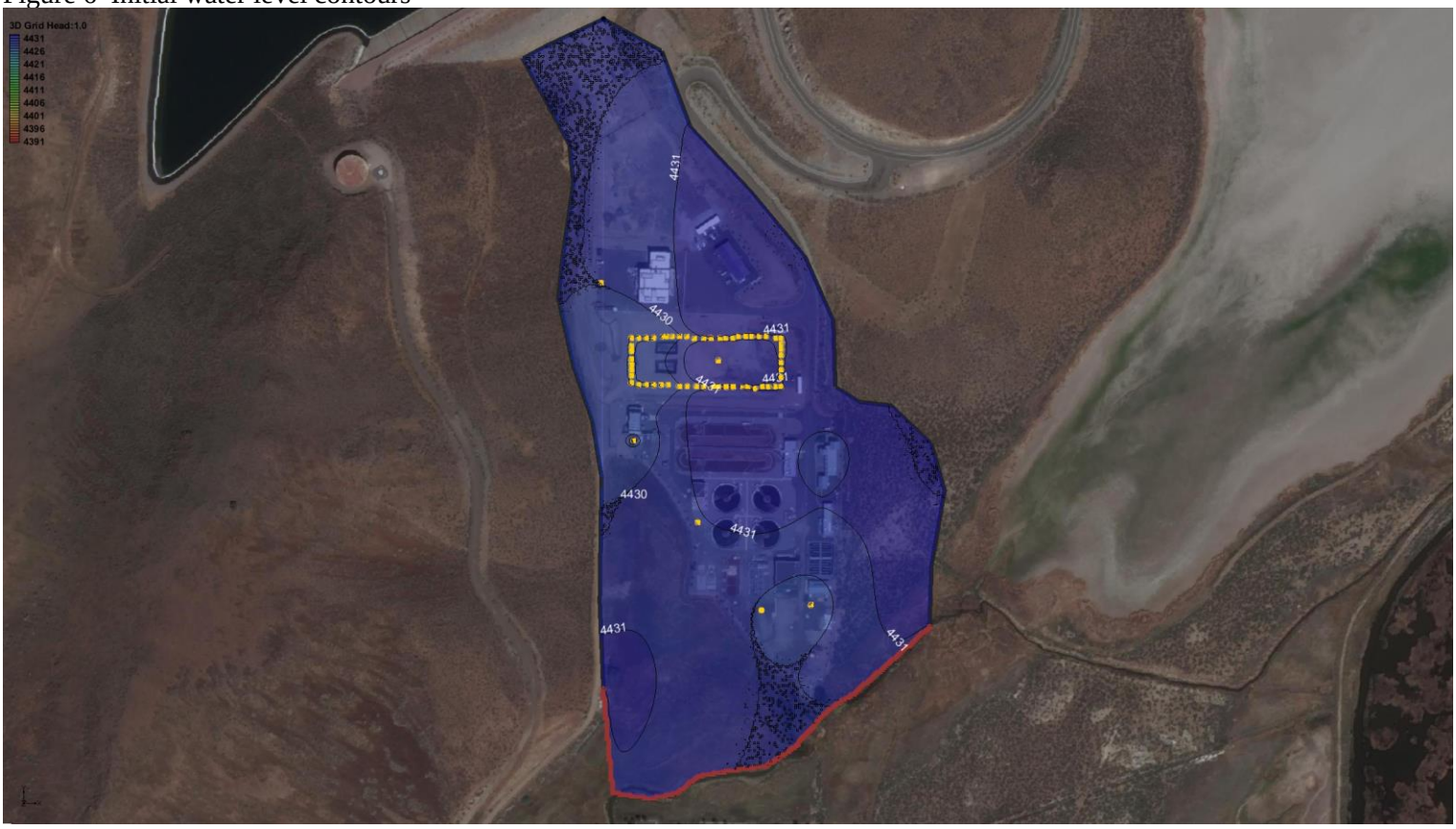
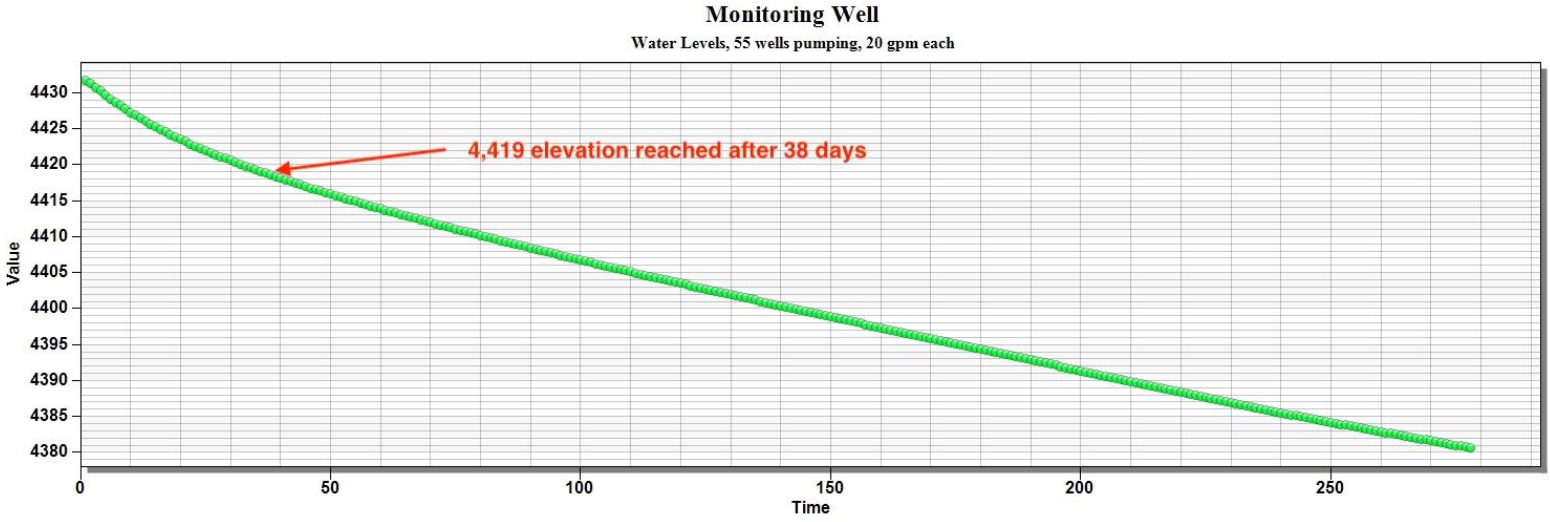


Figure 7 shows the water level contours after reaching the 4,419-foot target depth at the monitoring well. Figures 8-11 shows the water levels at the four corner dewatering wells and the monitoring well for the entire pumping period while construction of the bioreactors is completed. It is anticipated the construction will commence August 2021 and be completed by June 2022. In order to meet the required dewatering depth, the wells must be constructed and equipped by June 15, 2021. The dewatering process should commence immediately afterwards.

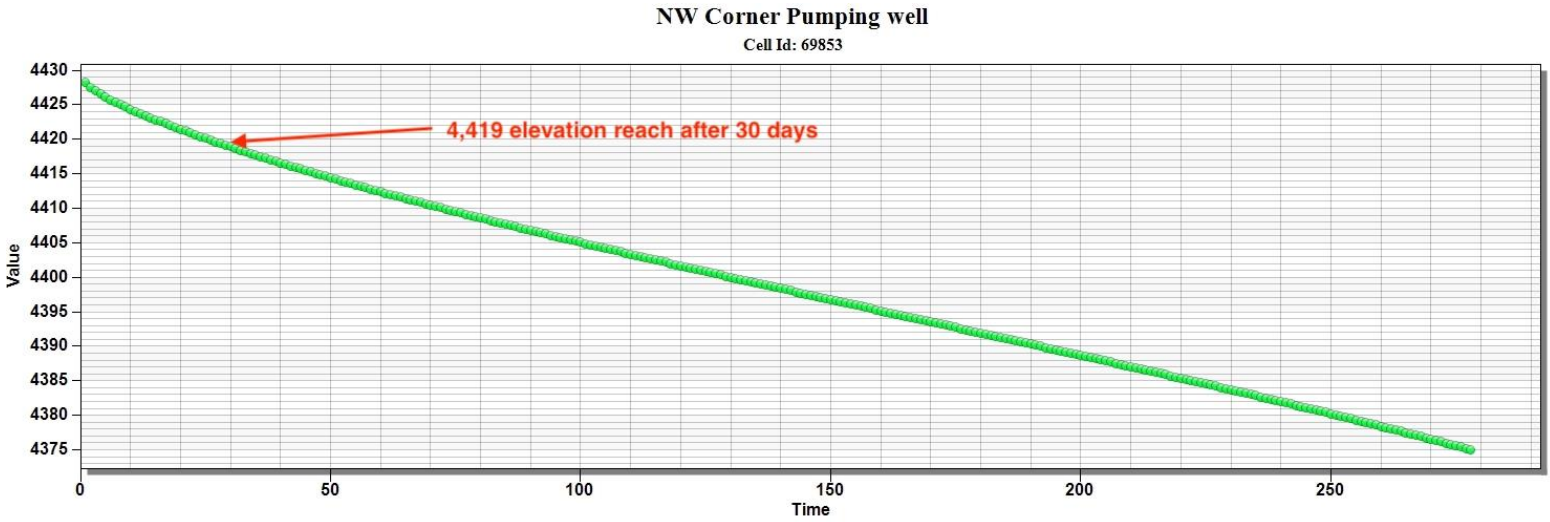
Figure 7. Water level Contours at 4,419 elevation

Figure 8 Monitoring Well Water Levels



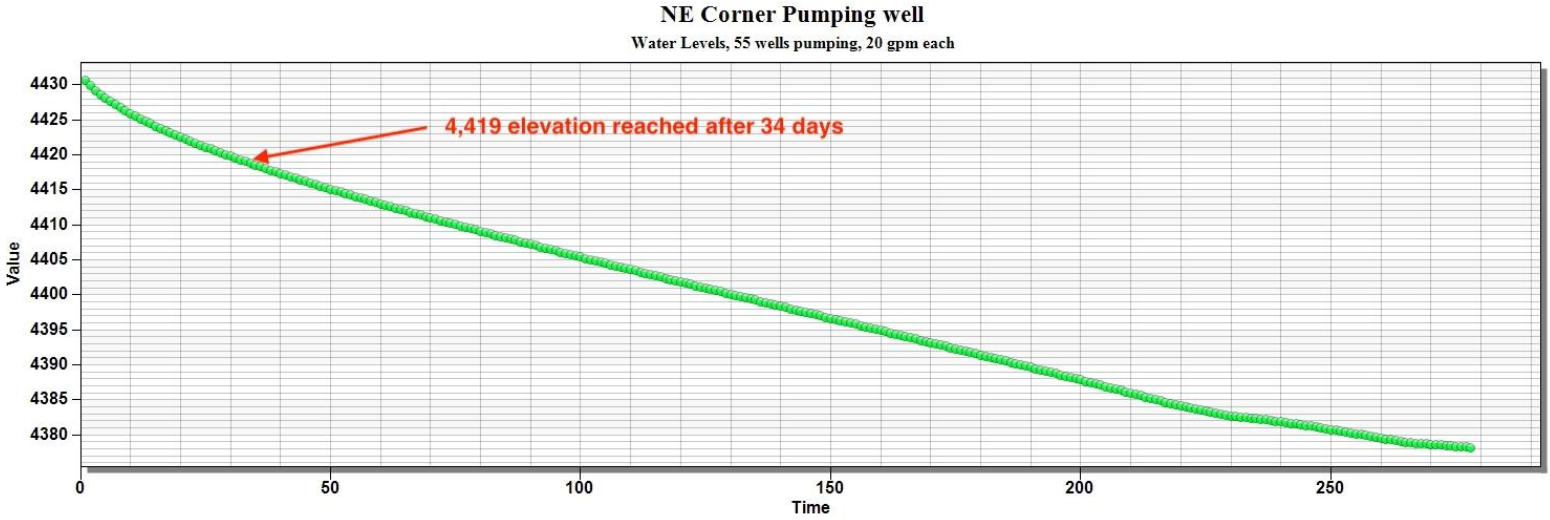
The Figure 8 water levels show the water level meeting the target depth, however the borehole log completed near this location (BH-3) shows two distinct layers of clay at 20-25 feet and 30-40 feet. This amount of clay in this area may preclude getting the water level down to the 4,419 elevation in the modeled 38 days.

Figure 9 NW Corner Pumping Well



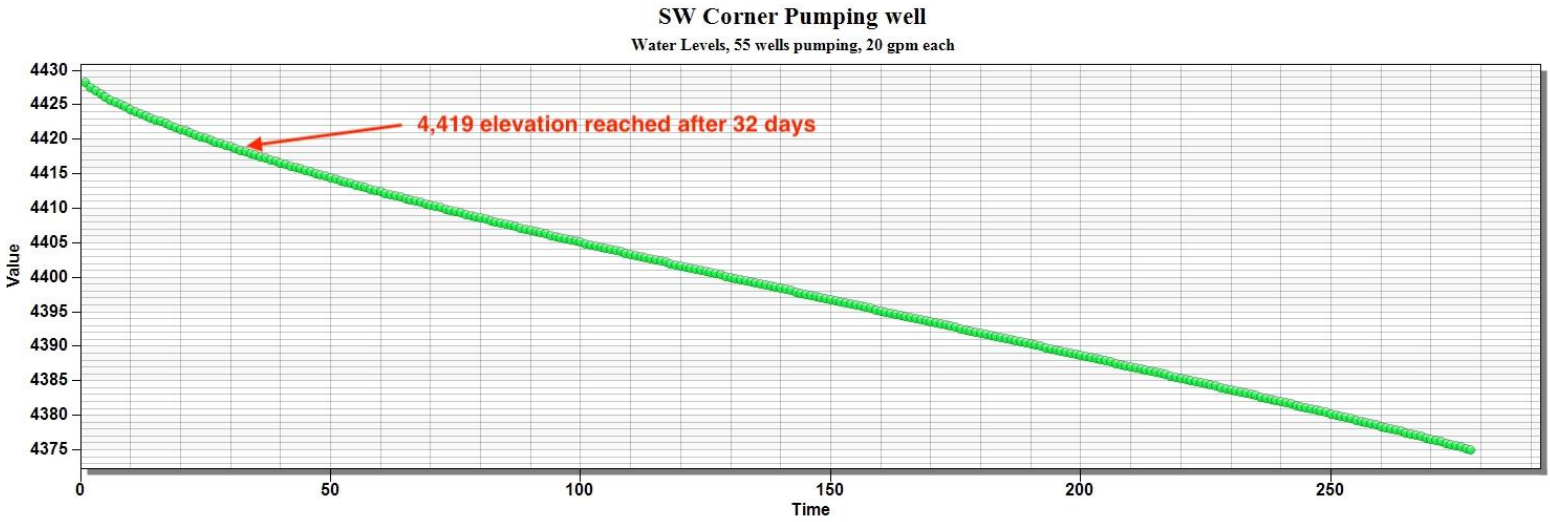
The potential for reaching the 4,419 elevation within the 30-day period as modeled and showed in Figure 9 is pretty good. The borehole (BH-2) drilled near this location contains less clay than what was observed in the monitoring well area. At this location there is significant layers of sandy/clay (20-feet), and one layer (2.5 feet) which was labeled as clayey sand.

Figure 10 NE Corner Pumping Well



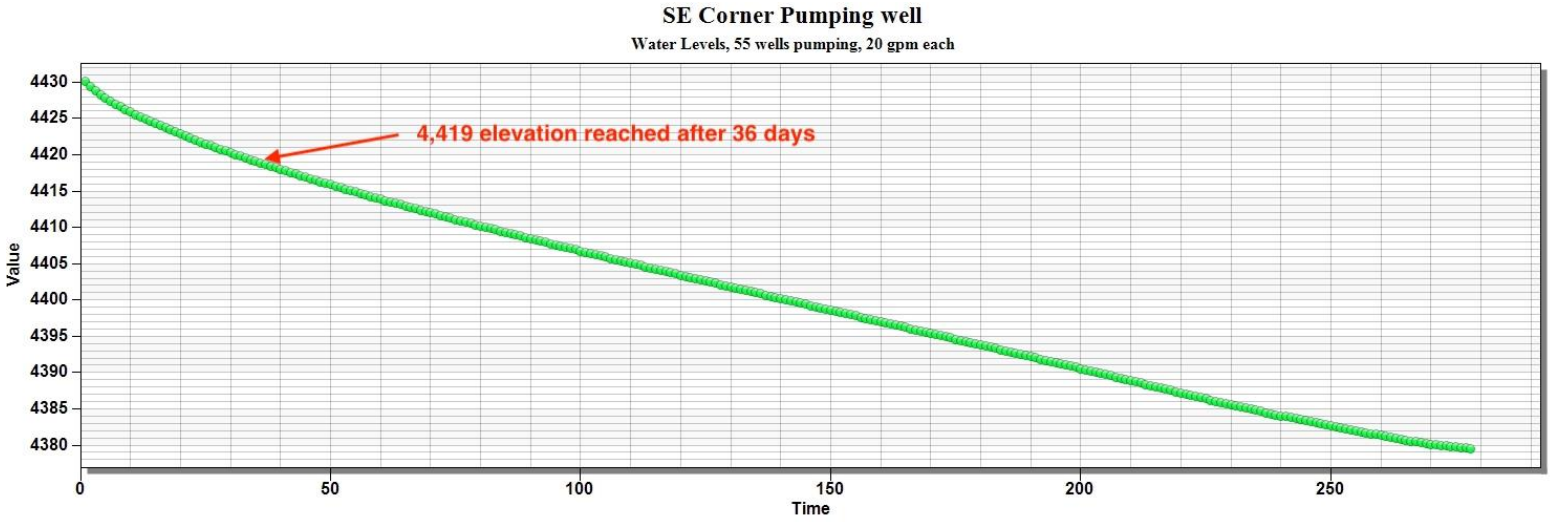
The potential for reaching the 4,419 elevation within the 34-day period as modeled and shown in figure 10 is reasonable. Near this location, the borehole (BH-4) log shows several layers that contain silty sand (8-feet) and sandy clay (19-feet). These two layers have the potential to produce more water than what was observed at the monitoring well location. The actual amount the wells in this area will produce can only be known after the dewatering wells are constructed and the pumps are installed.

Figure 11 SW Corner Pumping Well



At this location, the pumping well has good potential for reaching the target 4,419 elevation as modeled and shown in figure 11. Near this location, the borehole (BH-5) encountered 10 feet of clay with sand from 20 to 30 feet below ground surface. Overall there appears to be more silt material than clay throughout the boreholes total depth of 66.5 feet. Because of its location near the existing pumping wells, as shown on Figure 5, there is the potential that these two wells and sump pump might enhance the production capability of this Southwest Corner well.

Figure 12 SE Corner Pumping Well



The SE Corner well is most likely the hardest location to project the pumping potential of the well. The borehole (BH-6) contains layers of silty sand, but also contains 18 feet of clay (17 feet to 35 feet below ground surface).

6.0 SUMMARY

This section summarizes the data and information presented in this report:

- Dewatering of the bioreactors 3 and 4 footprint area is possible utilizing a total of 55 dewatering wells spaced at 15-17-foot intervals around the perimeter of the footprint.
- Each well should be drilled and constructed to a depth of 40 to 45 feet below ground surface and completed with 5 or 6-inch PVC casing.
- The constructed well should be completed with blank PVC between ground surface and 10-feet below ground surface. From 10-feet to total depth the well casing should consist of 0.05-inch (50 slot) screen.
- A gravel/sand pack (No. 6 x8) should be installed in the annular space.
- Each well should be equipped with a pump capable of producing approximately 20 gpm.
- Each well will be completed in alluvium material.

APPENDIX A

Revised Survey Control Plan Overall
Survey Control Plan Overall
Preliminary Site Layout

APPENDIX B

Geologic Logs

Project Narrative

Project Description: Washoe County is expanding and upgrading its South Truckee Meadows Water Reclamation Facility located at 8500 Alexander Lake Road, Reno, NV. Project requires dewatering for the construction of new treatment structures. Groundwater will be managed via dewatering wells and collection system to avoid / eliminate any surface discharge in accordance with the De Minimus permit Contractor is applying for. Collection system will convey water to a settling tank which will then discharge into nearby Thomas Creek. The De Minimus permit allows Contractor to discharge a total of 250 gpm into Thomas Creek with overages discharged into Washoe County's effluent reservoir or directly into its sewer system. Water table is approximately 8 ft below the surface with excavations 22 ft deep.

Dewatering wells will be installed at strategic locations around the structure to drawdown groundwater. Profile of each dewatering well is as follows:

- Depth: 40' on average
- Diameter: 24" – 30" bore hole
- Casing: 8" commercially slotted casing
- Slot size: .032
- Encasement: 3/8" clean crush

enveloped by drain rock and is equipped with a pump to pull the water from the ground and inject it into the collection system. The collection system consists of PVC piping connected to each dewatering well which is then conveyed to a settling tank and finally discharged into Thomas Creek. This approach eliminates any surface water discharge and associated erosion concerns.

BMPs: All groundwater will be fully contained and managed such that there is no potential for surface discharge and erosion.

- Pump casings – Pipe with holes to screen particles and debris
- Drain rock – To be placed around each casing.
- Settling tank – Enables solids and sediment to separate and settle before groundwater is discharged into Thomas Creek.
- Dirt bag – A secondary settlement mitigation measure located at / in Thomas Creek.
- Straw bales – Dirt bag sets on top of hay bales to filter fine sediment.
- Silt fence - Surrounds straw bales and dirt bag to further filter / collect sediment before reaching Thomas Creek.

NO.	DATE	REVISION	BY	APVD
DSGN	K WHITTIER	DR S WAGONER	CHK	APVD K WHITTIER

STMWRF 2020 EXPANSION PROJECT
WASHOE COUNTY DWR
RENO, NEVADA

Jacobs

BIOREACTORS 3 AND 4

RENDERING PERSPECTIVE

30% SUBMITTAL

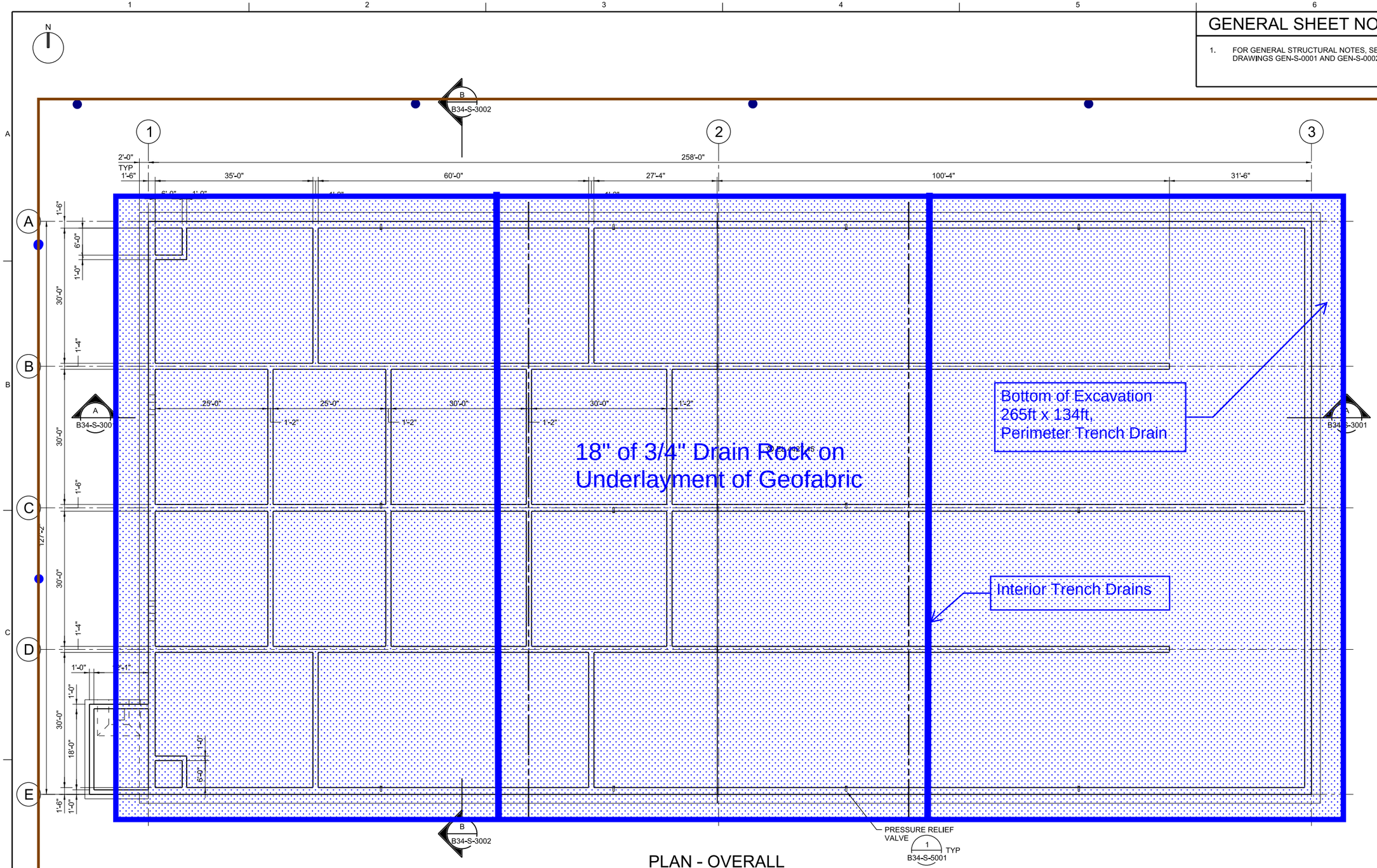
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

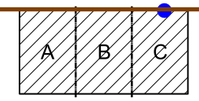
DATE	FEBRUARY 2021
PROJ	W7Y28601
DWG	B34-R-9001
SHEET	

GENERAL SHEET NOTES

1. FOR GENERAL STRUCTURAL NOTES, SEE DRAWINGS GEN-S-0001 AND GEN-S-0002.



PLAN - OVERALL
3/32"=1'-0"



KEYPLAN

NO.	DATE	DSGN
	A FIRTH	DR
REVISION	K DAVIS	CHK
	R FORREST	APVD
		BY
	K WHITTIER	APVD

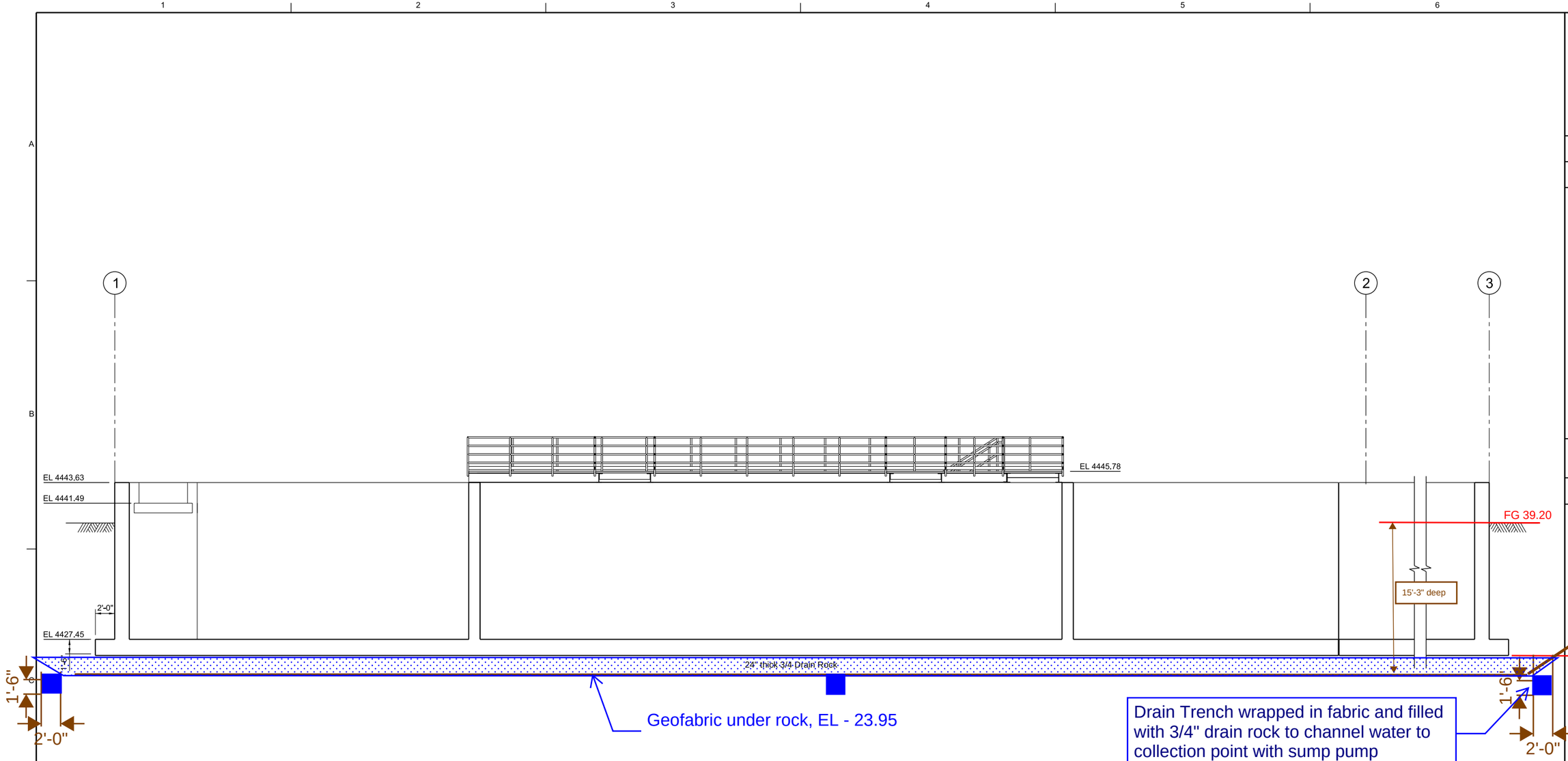
STMWRF 2020 EXPANSION PROJECT
WASHOE COUNTY DWR
RENO, NEVADA

Jacobs

BIOREACTORS 3 AND 4
STRUCTURAL
FOUNDATION/LOWER PLAN

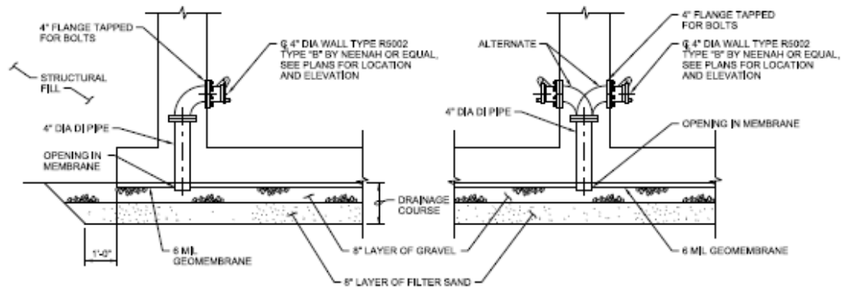
30% SUBMITTAL

AS NOTED	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	FEBRUARY 2021
PROJ	W7Y28601
DWG	B34-S-2030
SHEET	



Plans call for 6m geomembrane, 8" of filter sand and 8" gravel per Detail 1, Sheet B34-S-5001

CMAR is proposing 18" of 3/4" drain rock on geofabric



EXTERIOR WALL

INTERIOR WALL

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
DSGN	A FIRTH	K DAVIS		R FORREST		K WHITTIER	

ST : 2020 EXPANSIO... PROJECT
...ASHOE COUNTY
RENO, NEVADA

Jacobs

BIOREACTORS 3 AND 4
STRUCTURAL SECTION

30% SUBMITTAL

AS NOTED
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	FEBRUARY 2021
PROJ	W7Y28601
DWG	B34-S-3001
SHEET	

Bioreactor Basin Structure
Dimensions: 127' x 258'
BOE: 4426
Dewatering Start: June 15, 2021
Construction Start: August 2021
Completion: June 2022

Thomas Creek

Tie into existing Effluent Pump Station wetwell to send additional ground water to County's treatment plant and / or effluent reservoir for future use (volumes over 250 gpm)

Discharge water line to run under road inside existing 18" storm drain

Settlement Tank

CONTROL BUILDING
CO2 STORAGE & FEED SYSTEM
EXPORT PUMP STATION
FERRIC CHLORIDE & FEED SYSTEM
BLOWER BUILDING
FLOW METER VAULT
CHEMICAL BUILDING
MAINTENANCE BUILDING
PLANT ACCESS DRIVE
BIOREACTORS 3&4
BIOREACTORS 1&2
FILTERS
COLLABORATION BUILDING
BIOSOLIDS
HEADWORKS GRIT REMOVAL
HEADWORKS
VACTOR DUMP STATION
BIOSOLIDS EXPANSION

Flow Meter
Settling Tank
Discharge Pipe
Dirt Bag
Straw Bales
Silt Fence
Discharge Point
Volume < 250 gmp
Marsh / Flood Plain

Discharge Point Detail For Marsh / Thomas Creek

NOTES:
BOE = Bottom of Excavation
Surface Elevation = 4440
Dewatering Wells = ○
Dewatering Lines = ═══

GENERAL NOTES

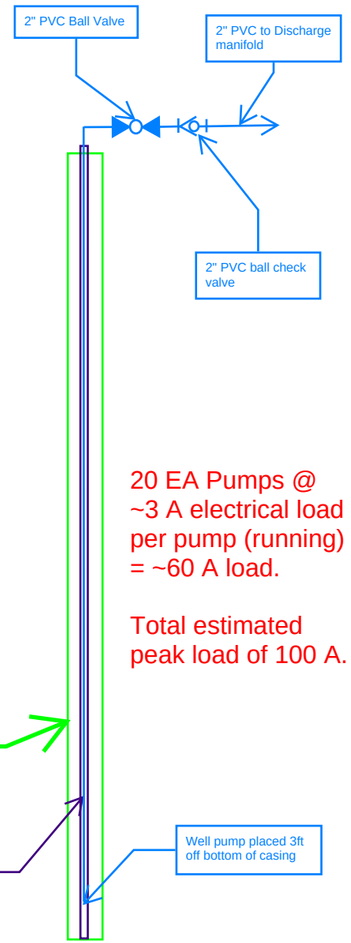
BASIS OF BEARINGS

NORTH AMERICAN DATUM OF 1983 AS BASED ON FEDERAL BASE NETWORK/COOPERATIVE BASE NETWORK OBSERVATIONS IN 1994 (AKA NAD83/94), NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE AND HOLDING THE WASHOE COUNTY PUBLISHED LATITUDE AND LONGITUDE OF 39°31' 12.71828" NORTH AND 119° 42' 10.28557" WEST FOR REGIONAL GNSS CORS "WWRF" (WASHOE COUNTY IDENTIFIER S11SM15000). A COMBINED GRID-TO-GROUND SCALE FACTOR OF 1.000197939 IS USED TO SCALE THE STATE PLANE GRID COORDINATES TO GROUND.

BASIS OF ELEVATIONS

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND HOLDING THE WASHOE COUNTY PUBLISHED ELLIPSOID HEIGHT OF 1326.259 METERS (4351.235 FEET) FOR REGIONAL GNSS CORS "WWRF" AND USING GEOID 99 TO DERIVE THE

Dewatering Well Detail



0 70 140 210
Scale in Feet

NO.	DSGN	DATE	DR	CHK	APVD	REVISION	BY	APVD
			S Callahan	E Davis	D Peters			

STMWRF INFULENT PUMP AND SCREEN
REPLACEMENT PROJECT
WASHOE COUNTY DWR
RENO, NEVADA

Jacobs

CIVIL SITE
SURVEY CONTROL PLAN
OVERALL

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	FEBRUARY 2021
PROJ	W7Y28601
DWG	CVS-C-2001
SHEET	

30% SUBMITTAL

Re: De Minimis Discharge Permit NVG201000
Site ID: DDP-48831
Project Name: South Truckee Water Reclamation Facility
Category 4: Yes
Date: 4/21/2021

Owner: MWH&KGW, a Joint Venture

Corey Maxfield
8001 Arista Place, Ste 500

Broomfield CO 80021

Operator: MWH&KGW, a Joint Venture

Corey Maxfield
8001 Arista Place, Ste 500

Broomfield CO 80021

Renew NO *** If this is a Renewal Application, NO filing fee is required.**

Submission of this Electronic Notice of Intent constitutes notice that the Permittee identified in this request intends to be authorized by a permit issued by the State of Nevada and has or will comply with the following:

1. The Permittee will comply with all applicable permit conditions,
2. The Permittee understands that implementation of all controls required under by a General Permit will begin at the time the permittee commences work on the project identified in this application;
3. The Permittee understands that failure to submit the required $200.00 fee and this signed Certification Page within 30 days of the electronic submittal will result in failure for eligible coverage under the General Permit; and,
4. That Nevada Administrative Code (NAC) 445A requires that a Permittee (discharger) who is covered under a general permit shall pay to the Director/Division an annual services fee on or before July 1 of each year that the discharger is covered under that permit; and,
5. To terminate coverage of a General Permit, the Permittee must submit a Notice of Termination ("NOT") form when their facility no longer has any discharges associated with the site identified in this application for General Permit coverage.

Please mail the filing fee of $200.00 along with this notice to:

Bureau of Water Pollution Control
Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701-5249

For General Stormwater questions, please call 775-687-9442.
For questions regarding other general permits please call 775-687-9492.

Project located in whole or in part on tribal lands: No

NOI Certification Statement

"I hereby certify that I am familiar with the information contained in the application and that to the best of my knowledge and ability such information is true, complete, and accurate."

Owner or Operator Name (Please Print): COREY MAXFIELD

Signature (Please use a Non-Black Ink Color):

Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained by the provisions of Nevada Administrative Code (NAC) 445A, or by any permit, rule, regulation, or order issued pursuant thereto, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the provisions of Nevada Administrative Code (NAC) 445A, inclusive, or by any permit, rule, regulation, or order issued pursuant thereto, is guilty of a gross misdemeanor and shall be punished by a fine of not more than $10,000 or by imprisonment in the county jail for not more than 1 year, or by both fine and imprisonment.

Attachmed File: N/A

Keep The Below Entered Information As Your Record

(New Permit: DDP-48831)

****

General Permit Questions

****

1. Category 1 – Public Water System (NRS 445A.235) Emergency discharges? - **No**
2. Category 2 - Existing Public Water System supply discharges? - **No**
3. Category 3 - Well development, testing & maintenance / aquifer testing / water quality testing? - **No**
4. Category 4 - Subsurface water discharge? - **Yes**
5. Category 5 - Utility vault water discharge? - **No**

****

Section 1

****

Facility / Site Information

Site Name: **South Truckee Water Reclamation Facility**
Address Line 1: **8455 Alexander Lake Road**
Address Line 2:
City / State / Zipocde: **Reno, 89511-____**
Contact Name (Phone #): **Corey Maxfield (7207876877)**
Email: **corey.maxfield@mwhconstructors.com**
Name of Receiving Water and /or Description of Discharge Location: **Ground water to be discharged into Thomas Creek**
Frequency of Discharge:
Estimated Flow in Gallons: **225**
Estimated Begin - End Date: **06/14/2021 - 06/14/2023**

Location / GIS Information

Assessor's Parcel Number (APN):
Standard Industrial Classification (SIC) Code:
County(ies):

****

Section 2, 3 And 4

****

Owner Name and Address

Is the Owner the Permittee? - **YES**
Owner Name: **MWH&KGW, a Joint Venture**
Address Line 1: **8001 Arista Place, Ste 500**
Address Line 2:
City / State / Zipocde: **Broomfield, 80021**
Contact Name: **Corey Maxfield**
Contact Phone #: **7208768775**
Taxpayer ID (TIN): **851236546**
Legal Status:

Operator Name and Address

Is the Operator the Permittee? - **YES**
Operator Name: **MWH&KGW, a Joint Venture**
Address Line 1: **8001 Arista Place, Ste 500**
Address Line 2:
City / State / Zipocde: **Broomfield,**
Contact Name: **Corey Maxfield**
Contact Phone #: **7208768775**
Taxpayer ID (TIN): **851236546**
Legal Status:

Billing/Invoicing

Send Annual Billing/Invoicing Information to:

Attachments

Attached File Name: **N/A**

4/2/2021

MWH & KGW
8001 Arista Pl
Broomfield, CO 80021
Attn: Corey Maxfield

OrderID: *21030580*

Dear: Corey Maxfield

This is to transmit the attached analytical report. The analytical data and information contained therein was generated using specified or selected methods contained in references, such as Standard Methods for the Examination of Water and Wastewater, online edition, Methods for Determination of Organic Compounds in Drinking Water, EPA-600/4-79-020, and Test Methods for Evaluation of Solid Waste, Physical/Chemical Methods (SW846) Third Edition.

The samples were received by WETLAB-Western Environmental Testing Laboratory in good condition on 3/17/2021. Additional comments are located on page 2 of this report.

If you should have any questions or comments regarding this report, please do not hesitate to call.

Sincerely,

Jennifer Delaney
QA Manager

Mckenna Oh
Project Manager

MckennaO@wetlaboratory.com
(775) 200-9876

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EPA LAB ID: NV00926

LAS VEGAS
3230 Polaris Ave. Suite 4
Las Vegas, Nevada 89102
tel (702) 475-8899
fax (702) 622-2868
EPA LAB ID: NV00932

Western Environmental Testing Laboratory
Report Comments

MWH & KGW - 21030580

Specific Report Comments

None

Subcontracting Comments

The analysis for VOC's was performed by Eurofins/Calscience of Garden Grove, CA. Their report is attached.

Report Legend

B	--	Blank contamination; Analyte detected above the method reporting limit in an associated blank
D	--	Due to the sample matrix dilution was required in order to properly detect and report the analyte. The reporting limit has been adjusted accordingly.
HT	--	Sample analyzed beyond the accepted holding time
J	--	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit. The reported result should be considered an estimate.
K	--	The TPH Diesel Concentration reported here likely includes some heavier TPH Oil hydrocarbons reported in the TPH Diesel range as per EPA 8015.
L	--	The TPH Oil Concentration reported here likely includes some lighter TPH Diesel hydrocarbons reported in the TPH Oil range as per EPA 8015.
M	--	The matrix spike/matrix spike duplicate (MS/MSD) values for the analysis of this parameter were outside acceptance criteria due to probable matrix interference. The reported result should be considered an estimate.
N	--	There was insufficient sample available to perform a spike and/or duplicate on this analytical batch.
NC	--	Not calculated due to matrix interference
QD	--	The sample duplicate or matrix spike duplicate analysis demonstrated sample imprecision. The reported result should be considered an estimate.
QL	--	The result for the laboratory control sample (LCS) was outside WETLAB acceptance criteria and reanalysis was not possible. The reported data should be considered an estimate.
S	--	Surrogate recovery was outside of laboratory acceptance limits due to matrix interference. The associated blank and LCS surrogate recovery was within acceptance limits
SC	--	Spike recovery not calculated. Sample concentration >4X the spike amount; therefore, the spike could not be adequately recovered
U	--	The analyte was analyzed for, but was not detected above the level of the reported sample reporting/quantitation limit. The reported result should be considered an estimate.

General Lab Comments

Per method recommendation (section 4.4), Samples analyzed by methods EPA 300.0 and EPA 300.1 have been filtered prior to analysis.

The following is an interpretation of the results from EPA method 9223B:
A result of zero (0) indicates absence for both coliform and Escherichia coli meaning the water meets the microbiological requirements of the U.S. EPA Safe Drinking Water Act (SDWA). A result of one (1) for either test indicates presence and the water does not meet the SDWA requirements. Waters with positive tests should be disinfected by a certified water treatment operator and retested.

Per federal regulation the holding time for the following parameters in aqueous/water samples is 15 minutes: Residual Chlorine, pH, Dissolved Oxygen, Sulfite.

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Western Environmental Testing Laboratory
Analytical Report

MWH & KGW
8001 Arista Pl
Broomfield, CO 80021
Attn: Corey Maxfield
Phone: (720)876-8775 **Fax:** NoFax

Date Printed: 4/2/2021
OrderID: *21030580*
PO\Project: *STMWRF 2020*

Customer Sample ID: Headworks
WETLAB Sample ID: 21030580-001
Collect Date/Time: 3/17/2021 12:58
Receive Date: 3/17/2021 14:07

Analyte	Method	Results		Units	DF	RL	Analyzed	LabID
General Chemistry								
Oxygen, Dissolved (DO)	SM 4500-O G	6.00	HT	mg/L	1	0.10	3/17/2021	NV00925
Chlorine, Total Residual	Hach 8167	ND	HT	mg/L	1	0.10	3/17/2021	NV00925
Hardness, Total (mg/L as CaCO3)	SM 2340B	110		mg/L as CaCO3	1	3.3	3/23/2021	NV00925
pH	SM 4500-H+ B	7.73	HT	pH Units	1		3/17/2021	NV00925
Temperature at pH	SM 2550B	22		°C	1		3/17/2021	NV00925
Total Phosphorous as P	SM 4500-P E	0.14		mg/L	1	0.020	3/24/2021	NV00925
Total Suspended Solids (TSS)	SM 2540D	ND		mg/L	1	10	3/22/2021	NV00925
Total Nitrogen	Calc.	0.65		mg/L	1	0.50	3/26/2021	NV00925
Total Dissolved Solids (TDS)	SM 2540C	440		mg/L	1	25	3/18/2021	NV00925
Turbidity (Nephelometric)	EPA 180.1	0.31		NTU	1	0.10	3/17/2021	NV00925
Microbiological Analyses								
Fecal Coliform (MPN)	IDEXX Quant/Colilert-18	ND		MPN/100ml	1	1.0	3/17/2021	NV00925
Total Coliform (MPN)	SM 9223B (Quantitray)	ND		MPN/100ml	1	1.0	3/17/2021	NV00925
Escherichia Coli (MPN)	SM 9223B (Quantitray)	ND		MPN/100ml	1	1.0	3/17/2021	NV00925
Anions by Ion Chromatography								
Fluoride	EPA 300.0	ND	D	mg/L	2	0.60	3/20/2021	NV00925
Sulfate	EPA 300.0	24		mg/L	2	3.0	3/20/2021	NV00925
Flow Injection Analyses								
Nitrate + Nitrite Nitrogen	EPA 353.2	0.46		mg/L	5	0.10	3/24/2021	NV00925
Total Kjeldahl Nitrogen	EPA 351.2	ND		mg/L	1	0.40	3/26/2021	NV00925
Trace Metals by ICP-OES								
Sulfur	EPA 200.7	9.6		mg/L	1	1.0	3/25/2021	NV00925
Barium	EPA 200.7	0.064		mg/L	1	0.020	3/23/2021	NV00925
Beryllium	EPA 200.7	ND		mg/L	1	0.0010	3/23/2021	NV00925
Boron	EPA 200.7	3.3		mg/L	1	0.10	3/23/2021	NV00925
Cadmium	EPA 200.7	ND		mg/L	1	0.0010	3/23/2021	NV00925
Calcium	EPA 200.7	25		mg/L	1	0.50	3/23/2021	NV00925
Copper	EPA 200.7	ND		mg/L	1	0.040	3/23/2021	NV00925
Iron	EPA 200.7	ND		mg/L	1	0.10	3/23/2021	NV00925
Magnesium	EPA 200.7	12		mg/L	1	0.50	3/23/2021	NV00925
Manganese	EPA 200.7	ND		mg/L	1	0.010	3/23/2021	NV00925
Molybdenum	EPA 200.7	ND		mg/L	1	0.020	3/23/2021	NV00925
Nickel	EPA 200.7	ND		mg/L	1	0.030	3/23/2021	NV00925
Silver	EPA 200.7	ND		mg/L	1	0.0050	3/23/2021	NV00925

DF=Dilution Factor, RL = Reporting Limit (minimum 3X the MDL), ND = Not Detected <RL or <MDL (if listed)

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EPA LAB ID: NV00932

Customer Sample ID: Headworks **Collect Date/Time:** 3/17/2021 12:58

WETLAB Sample ID: 21030580-001 **Receive Date:** 3/17/2021 14:07

Analyte	Method	Results		Units	DF	RL	Analyzed	LabID
Zinc	EPA 200.7	ND		mg/L	1	0.020	3/23/2021	NV00925
Trace Metals by ICP-MS								
Antimony	EPA 200.8	ND		mg/L	1	0.0025	3/24/2021	NV00925
Arsenic	EPA 200.8	0.084		mg/L	1	0.0050	3/24/2021	NV00925
Lead	EPA 200.8	ND		mg/L	1	0.0025	3/24/2021	NV00925
Selenium	EPA 200.8	ND		mg/L	1	0.0050	3/24/2021	NV00925
Thallium	EPA 200.8	ND		mg/L	1	0.0010	3/24/2021	NV00925
Mercury by CVAA								
Mercury	EPA 245.1	ND		mg/L	1	0.00045	3/24/2021	NV00925
Total Petroleum Hydrocarbons by GC-FID								
TPH Gas (C6 to C10)	EPA 8015B	ND		mg/L	1	1.0	3/23/2021	NV00925
TPH Diesel (C10 to C28)	EPA 8015B	0.24	N	mg/L	1	0.20	3/26/2021	NV00925
TPH Oil (C28 to C40)	EPA 8015B	ND	N	mg/L	1	0.50	3/26/2021	NV00925
Surrogate: p-Terphenyl	EPA 8015B	118		%				NV00925
Surrogate: aaa-Trifluorotoluene	EPA 8015B	106		%				NV00925
Surrogate: p-Terphenyl	EPA 8015B	118		%				NV00925
Sample Preparation								
TPH GRO Extraction	SW846 5021	Complete			1		3/23/2021	NV00925
TPH DRO/RRO Extraction	SW846 3510C	Complete			1		3/26/2021	NV00925
Trace Metals Digestion (Sulfur)	EPA 200.2	W210322-4A			1		3/22/2021	NV00925
Trace Metals Digestion	EPA 200.2	W210322-1A			1		3/22/2021	NV00925
Subcontracted Analyses								
VOCs by EPA 8260B	N/A	See Attached			1			

DF=Dilution Factor, RL = Reporting Limit (minimum 3X the MDL), ND = Not Detected <RL or <MDL (if listed)

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Western Environmental Testing Laboratory
QC Report

QCBatchID	QCType	Parameter	Method	Result	Actual	% Rec	Units
QC21030663	Blank 1	Total Dissolved Solids (TDS)	SM 2540C	ND			mg/L
QC21030692	Blank 1	Total Coliform (MPN)	SM 9223B (Quant	ND			MPN/100ml
		Escherichia Coli (MPN)	SM 9223B (Quant	ND			MPN/100ml
QC21030693	Blank 1	Fecal Coliform (MPN)	IDEXX Quant/Co	ND			MPN/100ml
QC21030694	Blank 1	Turbidity (Nephelometric)	EPA 180.1	ND			NTU
QC21030745	Blank 1	Fluoride	EPA 300.0	ND			mg/L
		Sulfate	EPA 300.0	ND			mg/L
QC21030752	Blank 1	Total Suspended Solids (TSS)	SM 2540D	ND			mg/L
QC21030800	Blank 1	Barium	EPA 200.7	ND			mg/L
		Beryllium	EPA 200.7	ND			mg/L
		Boron	EPA 200.7	ND			mg/L
		Cadmium	EPA 200.7	ND			mg/L
		Calcium	EPA 200.7	ND			mg/L
		Copper	EPA 200.7	ND			mg/L
		Iron	EPA 200.7	ND			mg/L
		Magnesium	EPA 200.7	ND			mg/L
		Manganese	EPA 200.7	ND			mg/L
		Molybdenum	EPA 200.7	ND			mg/L
		Nickel	EPA 200.7	ND			mg/L
		Silver	EPA 200.7	ND			mg/L
		Zinc	EPA 200.7	ND			mg/L
QC21030813	Blank 1	Antimony	EPA 200.8	ND			mg/L
		Arsenic	EPA 200.8	ND			mg/L
		Lead	EPA 200.8	ND			mg/L
		Selenium	EPA 200.8	ND			mg/L
		Thallium	EPA 200.8	ND			mg/L
QC21030834	Blank 1	Mercury, Dissolved	EPA 245.1	ND			mg/L
QC21030839	Blank 1	Total Phosphorous as P	SM 4500-P E	ND			mg/L
QC21030848	Blank 1	Nitrate + Nitrite Nitrogen	EPA 353.2	ND			mg/L
QC21030855	Blank 1	TPH Gas (C6 to C10)	EPA 8015B	ND			mg/L
		Surrogate: aaa-Trifluorotoluene	EPA 8015B	9.328	10	93	mg/L
QC21030878	Blank 1	Sulfur	EPA 200.7	ND			mg/L
QC21030931	Blank 1	Total Kjeldahl Nitrogen	EPA 351.2	ND			mg/L
QC21030958	Blank 1	TPH Diesel (C10 to C28)	EPA 8015B	ND			mg/L
		Surrogate: p-Terphenyl	EPA 8015B	0.0894	0.1	89	mg/L
QC21030960	Blank 1	TPH Oil (C28 to C40)	EPA 8015B	ND			mg/L
		Surrogate: p-Terphenyl	EPA 8015B	0.0894	0.1	89	mg/L

QCBatchID	QCType	Parameter	Method	Result	Actual	% Rec	Units
QC21030643	LCS 1	pH	SM 4500-H+ B	7.01	7.00	100	pH Units
QC21030663	LCS 1	Total Dissolved Solids (TDS)	SM 2540C	138	150	92	mg/L
QC21030663	LCS 2	Total Dissolved Solids (TDS)	SM 2540C	154	150	103	mg/L
QC21030694	LCS 1	Turbidity (Nephelometric)	EPA 180.1	4.94	5.00	99	NTU
QC21030745	LCS 1	Fluoride	EPA 300.0	1.86	2.00	93	mg/L
		Sulfate	EPA 300.0	24.3	25.0	97	mg/L
QC21030752	LCS 1	Total Suspended Solids (TSS)	SM 2540D	198	200	99	mg/L
QC21030752	LCS 2	Total Suspended Solids (TSS)	SM 2540D	199	200	99	mg/L
QC21030800	LCS 1	Barium	EPA 200.7	0.990	1.00	99	mg/L

DF=Dilution Factor, RL = Reporting Limit (minimum 3X the MDL), ND = Not Detected <RL or <MDL (if listed)

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EPA LAB ID: NV00932

QCBatchID	QCType	Parameter	Method	Result	Actual	% Rec	Units
		Beryllium	EPA 200.7	1.00	1.00	100	mg/L
		Boron	EPA 200.7	0.985	1.00	98	mg/L
		Cadmium	EPA 200.7	1.00	1.00	100	mg/L
		Calcium	EPA 200.7	10.1	10.0	101	mg/L
		Copper	EPA 200.7	5.00	5.00	100	mg/L
		Iron	EPA 200.7	1.00	1.00	100	mg/L
		Magnesium	EPA 200.7	9.88	10.0	99	mg/L
		Manganese	EPA 200.7	0.998	1.00	100	mg/L
		Molybdenum	EPA 200.7	1.00	1.00	100	mg/L
		Nickel	EPA 200.7	5.01	5.00	100	mg/L
		Silver	EPA 200.7	0.088	0.090	98	mg/L
		Zinc	EPA 200.7	1.00	1.00	100	mg/L
QC21030813	LCS 1	Antimony	EPA 200.8	0.0102	0.010	102	mg/L
		Arsenic	EPA 200.8	0.0478	0.050	96	mg/L
		Lead	EPA 200.8	0.0101	0.010	101	mg/L
		Selenium	EPA 200.8	0.0487	0.050	97	mg/L
		Thallium	EPA 200.8	0.0110	0.010	110	mg/L
QC21030834	LCS 1	Mercury, Dissolved	EPA 245.1	0.005280	0.005	106	mg/L
QC21030839	LCS 1	Total Phosphorous as P	SM 4500-P E	0.235	0.250	94	mg/L
QC21030848	LCS 1	Nitrate + Nitrite Nitrogen	EPA 353.2	0.964	1.00	96	mg/L
QC21030855	LCS 1	TPH Gas (C6 to C10)	EPA 8015B	54.4	50.0	109	mg/L
		Surrogate: aaa-Trifluorotoluene	EPA 8015B	10.245	10	102	mg/L
QC21030878	LCS 1	Sulfur	EPA 200.7	9.85	10.0	98	mg/L
QC21030931	LCS 1	Total Kjeldahl Nitrogen	EPA 351.2	0.984	1.00	98	mg/L
QC21030958	LCS 1	TPH Diesel (C10 to C28)	EPA 8015B	2.26	2.50	90	mg/L
		Surrogate: p-Terphenyl	EPA 8015B	0.1038	0.1	104	mg/L
QC21030960	LCS 1	TPH Oil (C28 to C40)	EPA 8015B	9.40	10.0	94	mg/L
		Surrogate: p-Terphenyl	EPA 8015B	0.11	0.1	110	mg/L

QCBatchID	QCType	Parameter	Method	Duplicate Sample	Sample Result	Duplicate Result		Units	RPD
QC21030643	Duplicate 1	pH	SM 4500-H+ B	21030496-009	6.75	6.82	HT	pH Units	1 %
QC21030643	Duplicate 2	pH	SM 4500-H+ B	21030558-001	7.48	7.52	HT	pH Units	1 %
QC21030663	Duplicate 1	Total Dissolved Solids (TDS)	SM 2540C	21030563-003	836	814		mg/L	3 %
QC21030663	Duplicate 2	Total Dissolved Solids (TDS)	SM 2540C	21030565-001	1668	1676		mg/L	<1%
QC21030693	Duplicate 1	Fecal Coliform (MPN)	IDEXX Quant/Colilert	21030592-001	5.10	5.00		MPN/100ml	2 %
QC21030694	Duplicate 1	Turbidity (Nephelometric)	EPA 180.1	21030543-005	8.94	8.77		NTU	2 %
QC21030752	Duplicate 1	Total Suspended Solids (TSS)	SM 2540D	21030488-002	ND	ND		mg/L	<1%
QC21030752	Duplicate 2	Total Suspended Solids (TSS)	SM 2540D	21030524-002	ND	ND		mg/L	NA

QCBatchID	QCType	Parameter	Method	Spike Sample	Sample Result		MS Result	MSD Result	Spike Value	Units	MS %Rec	MSD %Rec	RPD %
QC21030745	MS 1	Fluoride	EPA 300.0	21030553-002	ND		2.09	2.08	2	mg/L	96	96	<1
		Sulfate	EPA 300.0	21030553-002	28.5		38.6	38.6	10	mg/L	101	101	<1
QC21030745	MS 2	Fluoride	EPA 300.0	21030630-001	ND		2.03	2.06	2	mg/L	98	100	2
		Sulfate	EPA 300.0	21030630-001	37.3		47.0	47.0	10	mg/L	97	97	<1
QC21030800	MS 1	Barium	EPA 200.7	21030563-005	ND		0.960	0.973	1	mg/L	95	96	1
		Beryllium	EPA 200.7	21030563-005	ND		0.984	0.971	1	mg/L	98	97	1
		Boron	EPA 200.7	21030563-005	ND		1.02	1.01	1	mg/L	98	97	1
		Cadmium	EPA 200.7	21030563-005	0.092		1.05	1.05	1	mg/L	96	96	<1
		Calcium	EPA 200.7	21030563-005	269	SC	286	278	10	mg/L	NC	NC	NC

DF=Dilution Factor, RL = Reporting Limit (minimum 3X the MDL), ND = Not Detected <RL or <MDL (if listed)

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1084 Lamoille Hwy
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3230 Polaris Ave. Suite 4
Las Vegas, Nevada 89102
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EPA LAB ID: NV00932

QCBatchID	QCType	Parameter	Method	Spike Sample	Sample Result		MS Result	MSD Result	Spike Value	Units	MS %Rec	MSD %Rec	RPD %
		Copper	EPA 200.7	21030563-005	ND		4.91	4.91	5	mg/L	98	98	<1
		Iron	EPA 200.7	21030563-005	ND		0.933	0.932	1	mg/L	93	93	<1
		Magnesium	EPA 200.7	21030563-005	123		134	131	10	mg/L	112	82	2
		Manganese	EPA 200.7	21030563-005	0.042		1.00	0.989	1	mg/L	96	95	1
		Molybdenum	EPA 200.7	21030563-005	ND		0.998	1.00	1	mg/L	100	100	<1
		Nickel	EPA 200.7	21030563-005	ND		4.74	4.74	5	mg/L	95	95	<1
		Silver	EPA 200.7	21030563-005	ND		0.086	0.087	0.09	mg/L	96	96	1
		Zinc	EPA 200.7	21030563-005	1.27		2.28	2.25	1	mg/L	101	98	1
QC21030813	MS 1	Antimony	EPA 200.8	21030563-005	ND		0.0128	0.0126	0.01	mg/L	117	115	2
		Arsenic	EPA 200.8	21030563-005	ND		0.0493	0.0485	0.05	mg/L	95	94	2
		Lead	EPA 200.8	21030563-005	ND		0.0101	0.0100	0.01	mg/L	98	97	1
		Selenium	EPA 200.8	21030563-005	ND		0.0465	0.0463	0.05	mg/L	86	85	<1
		Thallium	EPA 200.8	21030563-005	ND		0.0100	0.0100	0.01	mg/L	98	98	<1
QC21030834	MS 1	Mercury, Dissolved	EPA 245.1	21030565-001	ND		0.005280	0.005360	0.005	mg/L	105	107	2
QC21030839	MS 1	Total Phosphorous as P	SM 4500-P E	21030524-002	0.140		0.365	0.355	0.25	mg/L	90	86	3
QC21030839	MS 2	Total Phosphorous as P	SM 4500-P E	21030562-002	0.101		0.357	0.365	0.25	mg/L	102	106	2
QC21030848	MS 1	Nitrate + Nitrite Nitrogen	EPA 353.2	21030579-001	0.882		5.90	5.96	1	mg/L	100	102	1
QC21030848	MS 2	Nitrate + Nitrite Nitrogen	EPA 353.2	21030603-002	0.363		5.36	5.36	1	mg/L	100	100	<1
QC21030855	MS 1	TPH Gas (C6 to C10)	EPA 8015B	21030580-001	ND		54.9	56.0	50	mg/L	110	112	2
		Surrogate: aaa-Trifluorotoluene	EPA 8015B	NA			11.487	10.26	10	mg/L	115	103	11
QC21030878	MS 1	Sulfur	EPA 200.7	21030580-001	9.56		19.3	18.6	10	mg/L	98	91	4
QC21030931	MS 1	Total Kjeldahl Nitrogen	EPA 351.2	21030565-004	ND	M	0.956	1.02	1	mg/L	NC	NC	NC
QC21030931	MS 2	Total Kjeldahl Nitrogen	EPA 351.2	21030579-005	ND	M	1.01	0.914	1	mg/L	NC	NC	NC

DF=Dilution Factor, RL = Reporting Limit (minimum 3X the MDL), ND = Not Detected <RL or <MDL (if listed)

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WETLAB
WESTERN ENVIRONMENTAL TESTING LABORATORY
Specializing in Soil, Hazardous Waste and Water Analysis.
475 E. Greg Street #119 | Sparks, Nevada 89431 | www.WETLaboratory.com
tel (775) 355-0202 | fax (775) 355-0817
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3230 Polaris Ave., Suite 4 | Las Vegas, Nevada 89102
tel (702) 475-8899 | fax (702) 776-6152

WETLAB Order ID: 21030580
Sparks
Elko
LV
Report Due Date
Page ____ of ____

Client: MWH & KGW
Address: 8001 ARISTA PL ST 500
City, State & Zip: BROOMFIELD CO 80021
Contact: COREY MAXFIELD
Phone: 720 876 8775
Collector's Name: COREY MAXFIELD / GARRETT LOOYERS
Fax:
Project: STMWRF ~~2000~~ 2020
P.O. Number:
PWS Number:
Email: Corey.Maxfield@mwhconstructors.com

Turnaround Time Requirements
Standard
5 Day* (25%) ____ 72 Hour* (50%) ____
48 Hour* (100%) ____ 24 Hour* (200%) ____
*Surcharges Will Apply

Samples Collected From Which State? NV X CA ____ Other ____
Compliance Monitoring? Yes No
Report to Regulatory Agency? Yes No
Report Results Via (PDF) EDD Other ____
Standard QC Required? (Yes) No

Billing Address (if different than Client Address)
Company
Address
City, State & Zip
Contact
Phone ____ Fax ____
Email

SAMPLE ID/LOCATION	DATE	TIME	PRES TYPE *	SAMPLE TYPE **	NO. OF CONTAINERS	Analyses Requested	Spl. No.
#1 HEADWORKS	3/17	12:58					
#2 HEADWORKS	3/17	12:58					
#3 HEADWORKS	3/17	12:59					
#4 "	3/17	1:01					
5	3/17						
6	3/17						
7	3/17						
8	3/17						
9	3/17						
10-14							

2103 6
0580 1

Instructions/Comments/Special Requirements:

Sample Matrix Key** DW = Drinking Water WW = Wastewater SW = Surface Water MW = Monitoring Well SD = Solid/Sludge SO = Soil HW = Hazardous Waste OTHER: ____

***SAMPLE PRESERVATIVES:** 1=Unpreserved 2=H2SO4 3=NaOH 4=HCl 5=HNO3 6=Na2S2O3 7=ZnOAc+NaOH 8=NH4Cl 9=H3PO4

Temp	On Ice	Custody Seal	DATE	TIME	Samples Relinquished By	Samples Received By
5.1 °C	(Y) / N	Y / (N)	3-17-21	1407		
°C	Y / N	Y / N				
°C	Y / N	Y / N				
°C	Y / N	Y / N				

WETLAB'S Standard Terms and Conditions apply unless written agreements specify otherwise. Payment terms are Net 30.

Client/Collector attests to the validity and authenticity of this (these) sample(s) and, is (are) aware that tampering with or intentionally mislabeling the sample(s) location, date or time of collection may be considered fraud and subject to legal action (NAC445.0636). ____ initial

To the maximum extent permitted by law, the Client agrees to limit the liability of WETLAB for the Client's damages to the total compensation received, unless other agreements are made in writing. This limitation shall apply regardless of the cause of action or legal theory pled or asserted. ____ initial

WETLAB will dispose of samples 90 days from sample receipt. Client may request a longer sample storage time for an additional fee. Please contact your Project Manager for details. ____ initial

301.2E

Benzene - µg/L	5.0	With NOI	Discrete
Ethyl benzene - µg/L	100	With NOI	Discrete
Toluene - µg/L	100	With NOI	Discrete
Xylene - µg/L	200	With NOI	Discrete
pH - S.U.	6.5 - 9.0	With NOI	Discrete
Turbidity - NTU[2, 3]	Monitor & Report	With NOI	Discrete
Barium - mg/L	2.0	With NOI	Discrete
Fluoride - mg/L	Monitor & Report	With NOI	Discrete
Iron - mg/L	1.0	With NOI	Discrete
Sulfate - mg/L	Monitor & Report	With NOI	Discrete
Dissolved Oxygen	Monitor & Report	With NOI	Discrete
Molybdenum - mg/L	6.16	With NOI	Discrete
Antimony	Monitor & Report	With NOI	Discrete
Arsenic	Monitor & Report	With NOI	Discrete
Beryllium	Monitor & Report	With NOI	Discrete
Boron	Monitor & Report	With NOI	Discrete
Cadmium	Monitor & Report	With NOI	Discrete
Calcium	Monitor & Report	With NOI	Discrete
Copper	Monitor & Report	With NOI	Discrete
Lead	Monitor & Report	With NOI	Discrete
Magnesium	Monitor & Report	With NOI	Discrete
Manganese	Monitor & Report	With NOI	Discrete
Mercury	Monitor & Report	With NOI	Discrete
Nickel	Monitor & Report	With NOI	Discrete
Selenium	Monitor & Report	With NOI	Discrete
Silver	Monitor & Report	With NOI	Discrete
Sulfur	Monitor & Report	With NOI	Discrete
Thallium	Monitor & Report	With NOI	Discrete
Zinc - total recoverable	Monitor & Report	With NOI	Discrete
Fecal Coliform - MPN100 mL	Monitor & Report	With NOI	Discrete
E Coli[4] - MPN/100mL	Monitor & Report	With NOI	Discrete
Hardness (expressed as $CaCO_3$) - mg/L	Monitor & Report	With NOI	Discrete

1. Samples must be collected during the first hour of discharge. For discharges that extend beyond an hour in duration, a second sample shall be collected prior to end of discharge, or as specified by the division.
2. BMPs shall be implemented to minimize erosion and sediment.
3. During the discharge, if a visible turbidity plume is generated, a grab sample shall be obtained. Turbidity shall be less than or equal to 10 Nephelometric Turbidity Units (NTUs) over the background value of the receiving water.
4. Single Value.
5. EPA Method 8015B and EPA Method 8260B, extractable and purgeable, C6-C40. Summation must meet permit limit.

A.9.1.4 Category 4 - Subsurface water discharges: NOI Sampling Requirements

Parameters	Discharge Limit Daily Maximum	Measurement Frequency	Sample Type
Total Residual Chlorine[1] - mg/L	0.10	With NOI	Discrete
Total Dissolved Solids (TDS) - mg/L	Monitor & Report	With NOI	Discrete
Total Suspended Solids (TSS) - mg/L	Monitor & Report	With NOI	Discrete
Total Petroleum Hydrocarbon (TPH) (C6 - C40) - mg/L[5]	1.0	With NOI	Discrete
Methyl tert-Butyl Ether (MTBE) - µg/L	20.0	With NOI	Discrete
Total Nitrogen as N - mg/L	10.0	With NOI	Discrete
Total Phosphorus as P - mg/L	Monitor & Report	With NOI	Discrete
Trichloroethylene (TCE) - µg/L	5.0	With NOI	Discrete
Tetrachloroethylene (PCE) - µg/L	5.0	With NOI	Discrete

Benzene - µg/L	5.0	With NOI	Discrete
Ethyl benzene - µg/L	100	With NOI	Discrete
Toluene - µg/L	100	With NOI	Discrete
Xylene - µg/L	200	With NOI	Discrete
pH - S.U.	6.5 - 9.0	With NOI	Discrete
Turbidity - NTU[2, 3]	Monitor & Report	With NOI	Discrete
Barium - mg/L	2.0	With NOI	Discrete
Fluoride - mg/L	Monitor & Report	With NOI	Discrete
Iron - mg/L	1.0	With NOI	Discrete
Sulfate - mg/L	Monitor & Report	With NOI	Discrete
Dissolved Oxygen	Monitor & Report	With NOI	Discrete
Molybdenum - mg/L	6.16	With NOI	Discrete
Antimony	Monitor & Report	With NOI	Discrete
Arsenic	Monitor & Report	With NOI	Discrete
Beryllium	Monitor & Report	With NOI	Discrete
Boron	Monitor & Report	With NOI	Discrete
Cadmium	Monitor & Report	With NOI	Discrete
Calcium	Monitor & Report	With NOI	Discrete
Copper	Monitor & Report	With NOI	Discrete
Lead	Monitor & Report	With NOI	Discrete
Magnesium	Monitor & Report	With NOI	Discrete
Manganese	Monitor & Report	With NOI	Discrete
Mercury	Monitor & Report	With NOI	Discrete
Nickel	Monitor & Report	With NOI	Discrete
Selenium	Monitor & Report	With NOI	Discrete
Silver	Monitor & Report	With NOI	Discrete
Sulfur	Monitor & Report	With NOI	Discrete
Thallium	Monitor & Report	With NOI	Discrete
Zinc - total recoverable	Monitor & Report	With NOI	Discrete
Fecal Coliform - MPN100 mL	Monitor & Report	With NOI	Discrete
E Coli[4] - MPN/100mL	Monitor & Report	With NOI	Discrete
Hardness (expressed as $CaCO_3$) - mg/L	Monitor & Report	With NOI	Discrete

1. Samples must be collected during the first hour of discharge. For discharges that extend beyond an hour in duration, a second sample shall be collected prior to end of discharge, or as specified by the division.
2. BMPs shall be implemented to minimize erosion and sediment.
3. During the discharge, if a visible turbidity plume is generated, a grab sample shall be obtained. Turbidity shall be less than or equal to 10 Nephelometric Turbidity Units (NTUs) over the background value of the receiving water.
4. Single Value.
5. EPA Method 8015B and EPA Method 8260B, extractable and purgeable, C6-C40. Summation must meet permit limit.

A.9.1.5 Category 5 - Utility vault water discharges: NOI Sampling Requirements

Parameters	Discharge Limit Daily Maximum	Measurement Frequency	Sample Type
Total Residual Chlorine[1] - mg/L	0.10	With NOI	Discrete
Total Dissolved Solids (TDS) - mg/L	Monitor & Report	With NOI	Discrete
Total Suspended Solids (TSS) - mg/L	Monitor & Report	With NOI	Discrete
Total Petroleum Hydrocarbon (TPH) (C6 - C40) - mg/L[5]	1.0	With NOI	Discrete
Methyl tert-Butyl Ether (MTBE) - µg/L	20.0	With NOI	Discrete
Total Nitrogen as N - mg/L	10.0	With NOI	Discrete
Total Phosphorus as P - mg/L	Monitor & Report	With NOI	Discrete
Trichloroethylene (TCE) - µg/L	5.0	With NOI	Discrete
Tetrachloroethylene (PCE) - µg/L	5.0	With NOI	Discrete

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience LLC
7440 Lincoln Way
Garden Grove, CA 92841
Tel: (714)895-5494

Laboratory Job ID: 570-54374-1
Client Project/Site: 21030580

For:
MDK LLC
475 E. Greg St.
Suite 119
Sparks, Nevada 89431

Attn: Logan Greenwood

Authorized for release by:
3/31/2021 12:00:50 PM
Lori Thompson, Project Manager I
(714)895-5494
Lori.Thompson@eurofinset.com

Designee for

Terri Chang, Project Manager I
(714)895-5494
Terri.Chang@eurofinset.com

Table of Contents

Definitions/Glossary

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

Job ID: 570-54374-1

Laboratory: Eurofins Calscience LLC

Narrative

Job Narrative
570-54374-1

Comments
No additional comments.

Receipt
The samples were received on 3/19/2021 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.7º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

Client Sample ID: 21030580-001

Lab Sample ID: 570-54374-1

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Calscience LLC

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: 21030580-001
Date Collected: 03/17/21 12:58
Date Received: 03/19/21 10:20

Lab Sample ID: 570-54374-1
Matrix: Water

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/30/21 18:24	1
Ethylbenzene	ND		1.0		ug/L			03/30/21 18:24	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			03/30/21 18:24	1
o-Xylene	ND		1.0		ug/L			03/30/21 18:24	1
m,p-Xylene	ND		2.0		ug/L			03/30/21 18:24	1
Tetrachloroethene	ND		1.0		ug/L			03/30/21 18:24	1
Toluene	ND		1.0		ug/L			03/30/21 18:24	1
Xylenes, Total	ND		2.0		ug/L			03/30/21 18:24	1
Trichloroethene	ND		1.0		ug/L			03/30/21 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 123*		*03/30/21 18:24*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/30/21 18:24*	*1*
Dibromofluoromethane (Surr)	*104*		*78 - 120*		*03/30/21 18:24*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*03/30/21 18:24*	*1*

Surrogate Summary

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-123)	(80-120)	(78-120)	(80-120)
570-54223-A-3 MS	Matrix Spike	100	104	99	103
570-54223-A-3 MSD	Matrix Spike Duplicate	99	102	98	102
570-54374-1	21030580-001	109	93	104	100
LCS 570-139546/4	Lab Control Sample	99	102	99	101
LCSD 570-139546/5	Lab Control Sample Dup	100	103	99	101
MB 570-139546/9	Method Blank	107	92	106	98

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 570-139546/9
Matrix: Water
Analysis Batch: 139546

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/30/21 11:39	1
Ethylbenzene	ND		1.0		ug/L			03/30/21 11:39	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			03/30/21 11:39	1
o-Xylene	ND		1.0		ug/L			03/30/21 11:39	1
m,p-Xylene	ND		2.0		ug/L			03/30/21 11:39	1
Tetrachloroethene	ND		1.0		ug/L			03/30/21 11:39	1
Toluene	ND		1.0		ug/L			03/30/21 11:39	1
Xylenes, Total	ND		2.0		ug/L			03/30/21 11:39	1
Trichloroethene	ND		1.0		ug/L			03/30/21 11:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 123*		*03/30/21 11:39*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/30/21 11:39*	*1*
Dibromofluoromethane (Surr)	*106*		*78 - 120*		*03/30/21 11:39*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*03/30/21 11:39*	*1*

Lab Sample ID: LCS 570-139546/4
Matrix: Water
Analysis Batch: 139546

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	51.14		ug/L		102	76 - 120		
Ethylbenzene			50.0	55.94		ug/L		112	80 - 120		
Methyl-t-Butyl Ether (MTBE)			50.0	48.80		ug/L		98	64 - 120		
o-Xylene			50.0	57.70		ug/L		115	80 - 121		
m,p-Xylene			100	113.7		ug/L		114	74 - 122		
Tetrachloroethene			50.0	54.35		ug/L		109	72 - 135		
Toluene			50.0	53.13		ug/L		106	76 - 120		
Trichloroethene			50.0	51.34		ug/L		103	80 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 123*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*78 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LCSD 570-139546/5
Matrix: Water
Analysis Batch: 139546

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	49.11		ug/L		98	76 - 120	4	20
Ethylbenzene			50.0	53.43		ug/L		107	80 - 120	5	20
Methyl-t-Butyl Ether (MTBE)			50.0	48.96		ug/L		98	64 - 120	0	20
o-Xylene			50.0	55.21		ug/L		110	80 - 121	4	20
m,p-Xylene			100	107.9		ug/L		108	74 - 122	5	20
Tetrachloroethene			50.0	51.72		ug/L		103	72 - 135	5	20
Toluene			50.0	51.34		ug/L		103	76 - 120	3	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-139546/5
Matrix: Water
Analysis Batch: 139546

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene			50.0	49.53		ug/L		99	80 - 122	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 123*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*78 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: 570-54223-A-3 MS
Matrix: Water
Analysis Batch: 139546

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		50.0	48.93		ug/L		98	75 - 125
Ethylbenzene	ND		50.0	53.05		ug/L		106	75 - 127
Methyl-t-Butyl Ether (MTBE)	ND		50.0	44.43		ug/L		89	65 - 125
o-Xylene	ND		50.0	55.15		ug/L		110	75 - 128
m,p-Xylene	ND		100	107.9		ug/L		108	75 - 128
Tetrachloroethene	ND		50.0	51.76		ug/L		104	54 - 149
Toluene	ND		50.0	51.67		ug/L		103	75 - 125
Trichloroethene	1.8		50.0	50.90		ug/L		98	68 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 123*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*78 - 120*
Toluene-d8 (Surr)	*103*		*80 - 120*

Lab Sample ID: 570-54223-A-3 MSD
Matrix: Water
Analysis Batch: 139546

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		50.0	48.81		ug/L		98	75 - 125	0	20
Ethylbenzene	ND		50.0	52.84		ug/L		106	75 - 127	0	20
Methyl-t-Butyl Ether (MTBE)	ND		50.0	47.94		ug/L		96	65 - 125	8	20
o-Xylene	ND		50.0	55.11		ug/L		110	75 - 128	0	20
m,p-Xylene	ND		100	107.0		ug/L		107	75 - 128	1	20
Tetrachloroethene	ND		50.0	51.71		ug/L		103	54 - 149	0	20
Toluene	ND		50.0	50.86		ug/L		102	75 - 125	2	20
Trichloroethene	1.8		50.0	50.86		ug/L		98	68 - 128	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 123*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*78 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*

QC Association Summary

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

GC/MS VOA

Analysis Batch: 139546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-54374-1	21030580-001	Total/NA	Water	8260B	
MB 570-139546/9	Method Blank	Total/NA	Water	8260B	
LCS 570-139546/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-139546/5	Lab Control Sample Dup	Total/NA	Water	8260B	
570-54223-A-3 MS	Matrix Spike	Total/NA	Water	8260B	
570-54223-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Lab Chronicle

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

Client Sample ID: 21030580-001
Date Collected: 03/17/21 12:58
Date Received: 03/19/21 10:20

Lab Sample ID: 570-54374-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	5 mL	5 mL	139546	03/30/21 18:24	CVA6	ECL 2
	Instrument ID: GCMSXX									

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

Accreditation/Certification Summary

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

Laboratory: Eurofins Calscience LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	Los Angeles County Sanitation Districts	10109	09-30-21
California	SCAQMD LAP	17LA0919	11-30-21
California	State	2944	09-30-21
Guam	State	20-003R	10-31-20 *
Nevada	State	CA00111	07-31-21
Oregon	NELAP	CA300001	01-30-22
USDA	US Federal Programs	P330-20-00034	02-10-23
Washington	State	C916-18	10-11-21

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	ECL 2
5030C	Purge and Trap	SW846	ECL 2

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ECL 2 = Eurofins Calscience LLC Lampson, 7445 Lampson Ave, Garden Grove, CA 92841, TEL (714)895-5494

Sample Summary

Client: MDK LLC
Project/Site: 21030580

Job ID: 570-54374-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
570-54374-1	21030580-001	Water	03/17/21 12:58	03/19/21 10:20	

54374

WETLAB
WESTERN ENVIRONMENTAL TESTING LABORATORY

Subcontracting Chain of Custody

Analysis to be subcontracted to. Eurofins Calscience

Lab Number
Report Due Date 3/31/2021
Page 1 of 1

CLIENT REQUIREMENTS

Client	Western Environmental Testing Laboratory
Address	475 E. Greg St. Suite #117
City, State Zip	Sparks, NV 89431
Contact.	Mckenna Oh
Phone	(775) 355-0202
Collector's Name	Maxfield / Garrett Ko
PWS/Site	
WETLab Job ID	21030580
WETLab Client Code.	MWHC
Email	Reporting@wetlaboratory.com

Billing Address (if different than Client Address)

Client	Western Environmental Testing Laboratory
Address	475 E. Greg St. Suite #117
City, State Zip	Sparks, NV 89431
Contact.	Accounts Payable
Phone.	(775) 355-0202
Fax:	(775) 355-0817
Email	Reporting@wetlaboratory.com

Turnaround Time Requirements		Reporting Results Via	
Standard	✓	Fax	
5 Day*		PDF	X
3 Day*		EDD	X
48 Hour*		Mail Only	
24 Hour*		Other	

Compliance Monitoring		Samples Collected From Which State?			Standard Level QC Required?		
Yes	✓	NV	✓	CA	Yes	X	No
No		Other:			Level IV QC		

SAMPLE ID/LOCATION	WETLAB SampleID	Date	Time	SAMPLE TYPE (Key found below)	NO. OF CONTAINERS	[redacted]	[redacted]	VOCs by EPA 8260B	SAMPLE NUMBER (LAB USE ONLY)
Headworks	21030580-001	3/17/2021	12 58:00 PM	SW	3			✓	

ANALYSES REQUESTED

Instructions/Comments/Special Requirements

Please send Sample Receipts, Reports and Invoices to Reporting@wetlaboratory.com

Please analyze trip blanks if there are VOC hits. Thank you!
Please see attached for VOCs.

Sample Matrix/Type Key**

DW=Drinking water WW=Waste Water SW=Surfacewater MW=Monitoring Well SD=Solid/Sludge
SO=Soil HW=Hazardous Waste OT=Other

SAMPLE RECEIPT CONDITIONS	DATE	TIME	SAMPLES RELINQUISHED BY	SAMPLES RECEIVED BY
Temperature _____ c	3/18/21	2pm		FEDEX
Custody Seals Intact ? Y N None				3/19/21
Number of Containers _____				10:20

WETLAB'S Standard Terms and Conditions apply unless written agreements specify otherwise. Payment terms are Net 30 for established customers. Pre-payment is required for clients without an account.

Client/Collector attests to the validity and authenticity of this (these) sample(s) and, is (are) aware that tampering with or intentionally mislabeling the sample(s) location or date/time of collection will be considered fraud and may be subject to legal action (NAC445 0636)

Samples are discarded 90 days after receipt unless other arrangements have been made with the laboratory

To the maximum extent permitted by law, the Client agrees to limit the liability of WETLAB for the Client's damages to the total compensation received, unless other arrangements are made in writing

This limitation shall apply regardless of the cause of action or legal theory pled or asserted

3-8 12-7
Sa

570-54374 Chain of Custody

Benzene - µg/L	5.0	With NOI	Discrete
Ethyl benzene - µg/L	100	With NOI	Discrete
Toluene - µg/L	100	With NOI	Discrete
Xylene - µg/L	200	With NOI	Discrete
pH - S.U.	6.5 - 9.0	With NOI	Discrete
Turbidity - NTU[2, 3]	Monitor & Report	With NOI	Discrete
Barium - mg/L	2.0	With NOI	Discrete
Fluoride - mg/L	Monitor & Report	With NOI	Discrete
Iron - mg/L	1.0	With NOI	Discrete
Sulfate - mg/L	Monitor & Report	With NOI	Discrete
Dissolved Oxygen	Monitor & Report	With NOI	Discrete
Molybdenum - mg/L	6.16	With NOI	Discrete
Antimony	Monitor & Report	With NOI	Discrete
Arsenic	Monitor & Report	With NOI	Discrete
Beryllium	Monitor & Report	With NOI	Discrete
Boron	Monitor & Report	With NOI	Discrete
Cadmium	Monitor & Report	With NOI	Discrete
Calcium	Monitor & Report	With NOI	Discrete
Copper	Monitor & Report	With NOI	Discrete
Lead	Monitor & Report	With NOI	Discrete
Magnesium	Monitor & Report	With NOI	Discrete
Manganese	Monitor & Report	With NOI	Discrete
Mercury	Monitor & Report	With NOI	Discrete
Nickel	Monitor & Report	With NOI	Discrete
Selenium	Monitor & Report	With NOI	Discrete
Silver	Monitor & Report	With NOI	Discrete
Sulfur	Monitor & Report	With NOI	Discrete
Thallium	Monitor & Report	With NOI	Discrete
Zinc - total recoverable	Monitor & Report	With NOI	Discrete
Fecal Coliform - MPN100 mL	Monitor & Report	With NOI	Discrete
E Coli[4] - MPN/100mL	Monitor & Report	With NOI	Discrete
Hardness (expressed as $CaCO_3$) - mg/L	Monitor & Report	With NOI	Discrete

1. Samples must be collected during the first hour of discharge. For discharges that extend beyond an hour in duration, a second sample shall be collected prior to end of discharge, or as specified by the division.
2. BMPs shall be implemented to minimize erosion and sediment.
3. During the discharge, if a visible turbidity plume is generated, a grab sample shall be obtained. Turbidity shall be less than or equal to 10 Nephelometric Turbidity Units (NTUs) over the background value of the receiving water.
4. Single Value.
5. EPA Method 8015B and EPA Method 8260B, extractable and purgeable, C6-C40. Summation must meet permit limit.

A.9.1.4 Category 4 - Subsurface water discharges: NOI Sampling Requirements

Parameters	Discharge Limit Daily Maximum	Measurement Frequency	Sample Type
Total Residual Chlorine[1] - mg/L	0.10	With NOI	Discrete
Total Dissolved Solids (TDS) - mg/L	Monitor & Report	With NOI	Discrete
Total Suspended Solids (TSS) - mg/L	Monitor & Report	With NOI	Discrete
Total Petroleum Hydrocarbon (TPH) (C6 - C40) - mg/L[5]	1.0	With NOI	Discrete
Methyl tert-Butyl Ether (MTBE) - µg/L	20.0	With NOI	Discrete
Total Nitrogen as N - mg/L	10.0	With NOI	Discrete
Total Phosphorus as P - mg/L	Monitor & Report	With NOI	Discrete
Trichloroethylene (TCE) - µg/L	5.0	With NOI	Discrete
Tetrachloroethylene (PCE) - µg/L	5.0	With NOI	Discrete

Benzene - µg/L	5.0	With NOI	Discrete
Ethyl benzene - µg/L	100	With NOI	Discrete
Toluene - µg/L	100	With NOI	Discrete
Xylene - µg/L	200	With NOI	Discrete
pH - S.U.	6.5 - 9.0	With NOI	Discrete
Turbidity - NTU[2, 3]	Monitor & Report	With NOI	Discrete
Barium - mg/L	2.0	With NOI	Discrete
Fluoride - mg/L	Monitor & Report	With NOI	Discrete
Iron - mg/L	1.0	With NOI	Discrete
Sulfate - mg/L	Monitor & Report	With NOI	Discrete
Dissolved Oxygen	Monitor & Report	With NOI	Discrete
Molybdenum - mg/L	6.16	With NOI	Discrete
Antimony	Monitor & Report	With NOI	Discrete
Arsenic	Monitor & Report	With NOI	Discrete
Beryllium	Monitor & Report	With NOI	Discrete
Boron	Monitor & Report	With NOI	Discrete
Cadmium	Monitor & Report	With NOI	Discrete
Calcium	Monitor & Report	With NOI	Discrete
Copper	Monitor & Report	With NOI	Discrete
Lead	Monitor & Report	With NOI	Discrete
Magnesium	Monitor & Report	With NOI	Discrete
Manganese	Monitor & Report	With NOI	Discrete
Mercury	Monitor & Report	With NOI	Discrete
Nickel	Monitor & Report	With NOI	Discrete
Selenium	Monitor & Report	With NOI	Discrete
Silver	Monitor & Report	With NOI	Discrete
Sulfur	Monitor & Report	With NOI	Discrete
Thallium	Monitor & Report	With NOI	Discrete
Zinc - total recoverable	Monitor & Report	With NOI	Discrete
Fecal Coliform - MPN100 mL	Monitor & Report	With NOI	Discrete
E Coli[4] - MPN/100mL	Monitor & Report	With NOI	Discrete
Hardness (expressed as $CaCO_3$) - mg/L	Monitor & Report	With NOI	Discrete

1. Samples must be collected during the first hour of discharge. For discharges that extend beyond an hour in duration, a second sample shall be collected prior to end of discharge, or as specified by the division.
2. BMPs shall be implemented to minimize erosion and sediment.
3. During the discharge, if a visible turbidity plume is generated, a grab sample shall be obtained. Turbidity shall be less than or equal to 10 Nephelometric Turbidity Units (NTUs) over the background value of the receiving water.
4. Single Value.
5. EPA Method 8015B and EPA Method 8260B, extractable and purgeable, C6-C40. Summation must meet permit limit.

A.9.1.5 Category 5 - Utility vault water discharges: NOI Sampling Requirements

Parameters	Discharge Limit Daily Maximum	Measurement Frequency	Sample Type
Total Residual Chlorine[1] - mg/L	0.10	With NOI	Discrete
Total Dissolved Solids (TDS) - mg/L	Monitor & Report	With NOI	Discrete
Total Suspended Solids (TSS) - mg/L	Monitor & Report	With NOI	Discrete
Total Petroleum Hydrocarbon (TPH) (C6 - C40) - mg/L[5]	1.0	With NOI	Discrete
Methyl tert-Butyl Ether (MTBE) - µg/L	20.0	With NOI	Discrete
Total Nitrogen as N - mg/L	10.0	With NOI	Discrete
Total Phosphorus as P - mg/L	Monitor & Report	With NOI	Discrete
Trichloroethylene (TCE) - µg/L	5.0	With NOI	Discrete
Tetrachloroethylene (PCE) - µg/L	5.0	With NOI	Discrete

Login Sample Receipt Checklist

Client: MDK LLC

Job Number: 570-54374-1

Login Number: 54374
List Number: 1
Creator: Ramos, Maribel

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	