



FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: VISTA CANYON GROUP
370 VAN GORDON STREET
DENVER, CO - 80228

Permit Number: NV0020893

Location: SPARKS SOLVENT/FUEL REMEDIATION SITE, WASHOE
255 SOUTH STANFORD WAY, SPARKS, NV - 89431
LATITUDE: 39.531721, LONGITUDE: -119.743773
TOWNSHIP: T19N, RANGE: R20E, SECTION: S9

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
01A	SPARKS RAIL YARD/TERMINAL REMEDIATION FACILITY TO PEOPLE'S DITCH	External Outfall		SPARKS	NV	89431	WASHOE	39.5288	-119.7245	TRUCKEE RIVER VIA PEOPLE'S DITCH AND THE NORTH TRUCKEE DRAIN
01B	SPARKS RAIL YARD/TERMINAL REMEDIATION FACILITY TO PEOPLE'S DITCH (NOVEMBER-MARCH)	External Outfall		SPARKS	NV	89431	WASHOE	39.5288	-119.7245	TRUCKEE RIVER VIA PEOPLE'S DITCH AND THE NORTH TRUCKEE DRAIN
01C	SPARKS RAIL YARD/TERMINAL REMEDIATION FACILITY TO PEOPLE'S DITCH (APRIL-OCTOBER)	External Outfall		SPARKS	NV	89431	WASHOE	39.5288	-119.7245	TRUCKEE RIVER VIA PEOPLE'S DITCH AND THE NORTH TRUCKEE DRAIN
01D	SPARKS RAIL YARD/TERMINAL REMEDIATION FACILITY TO PEOPLE'S DITCH (MAY-OCTOBER)	External Outfall		SPARKS	NV	89431	WASHOE	39.5288	-119.7245	TRUCKEE RIVER VIA PEOPLE'S DITCH AND THE NORTH TRUCKEE DRAIN
01E	SPARKS RAIL YARD/TERMINAL REMEDIATION FACILITY TO PEOPLE'S DITCH (NOVEMBER-APRIL)	External Outfall		SPARKS	NV	89431	WASHOE	39.5288	-119.7245	TRUCKEE RIVER VIA PEOPLE'S DITCH AND THE NORTH TRUCKEE DRAIN
02A	PHYTOREMEDIATION PLOTS	External Outfall		SPARKS	NV	89431	WASHOE	39.5315	-119.7368	GROUNDWATER
03A	PEOPLES DITCH AND PHYTOREMEDIATION PLOTS	Sum		SPARKS	NV	89431	WASHOE	39.53	-119.73	GROUNDWATER AND TRUCKEE RIVER

General:

The Permittee has applied for the renewal of the National Pollutant Discharge Elimination System (NPDES) permit NV0020893. This permit authorizes the discharge of treated groundwater from the Sparks

Solvent/Fuel Site (SSFS) to the Truckee River via the People's Ditch and the North Truckee Drain, and the irrigation of a phyto-remediation plot. The water level at the Sparks Marina Park Lake (SMPL) controls the local hydrogeology, including the contaminated groundwater underlying the SSFS. Subsurface remediation and monitoring efforts began at the SSFS in 1995 and the initial NPDES permit was issued in October 1998 after the SMPL (formerly Helm's Pit) began filling around 1997. Remedial efforts currently focus on groundwater remediation at select locations where residual areas of groundwater contaminated with petroleum hydrocarbons have been identified. These areas are located near the SMPL, the SSFS, and several intermediary locations on the south side of Interstate Highway 80.

Groundwater extracted from the zone of highest hydrocarbon concentration is treated at Plant 1 using two 10,000 pound granulated activated carbon (GAC) canisters operated in series to treat groundwater contaminated with low levels of degradable organic compounds. The GAC canisters can treat approximately 500 gallons per minute (gpm). Following treatment at Plant 1, the treated water is pumped to a denitrification system located at Plant 2. Plant 2 consists of a single 1,000 gpm US Filter/Envirex Products anoxic fluidized bed reactor (FBR). The FBR bed is composed of sand particles with an attached biofilm. The sand is fluidized by injection and the upward movement of the water and attached growth biological treatment biologically degrades the organic contaminants. The attached growth system allows for longer residence times creating bacteria highly acclimated to the wastewater. The fluid bed has a very high surface area that is not likely to plug because the sand is fluidized.

In previous permits, a high pressure oxidation (HiPOx) unit adjacent to Plant 1 provided groundwater treatment at the wellhead for the removal of methyl tertiary butyl ether (MTBE); however this equipment is no longer in use because the MTBE in the extracted groundwater is consistently below the 40 µg/L permit limit. In 2013, the permit underwent a minor modification and the two (2) aerobic FBRs with carbon media for the removal of organic constituents were removed from Plant 1 and replaced with the GAC system. Total flow through the combined system is approximately 1.6 million gallons per day (MGD). It is anticipated that the denitrification system located at Plant 2 will be moved to the Plant 1 location in 2015.

Total Maximum Daily Loads (TMDLs) for Total Nitrogen, Total Phosphorous, and Total Dissolved Solids exist for the Truckee River. Therefore, Individual Waste Load Allocations (IWLAs) for these constituents are assigned to this discharge and have been in effect since permit issuance in 1998. The IWLAs for the 3 IWLA dischargers were calculated during the initial Vista Canyon Group permitting process to be consistent with the assumptions and requirements of the TMDLs, and the methodology and calculations can be found in the 1998 Vista Canyon Group Fact Sheet.

Discharge Characteristics:

The discharge consists of recovered groundwater that is pumped and treated to remove fuel and solvent products targeted under the "Sparks Solvent/Fuel Site Remediation" project. Subsurface remediation and monitoring of the groundwater began in 1995. Contaminants of concern include benzene, MTBE, and tetrachloroethylene (PCE). The groundwater treatment system is designed to achieve the level of treatment necessary to satisfy the discharge limitations established in the 1998 permit.

The area from which the hydrocarbon impacted groundwater is extracted has shown high levels of nitrogen compounds and Total Phosphorus unrelated to the original petroleum product releases addressed in the remedial action. Treatment is required prior to discharge in order to comply with the TMDL assigned to the Truckee River and the apportioned IWLAs for Total Nitrogen and Total Phosphorus, which were allocated in the 1998 Permit and remain in force. During the period from January 2008 through December 2013, the Total Phosphorus and Total Dissolved Solids 30-Day Average IWLA (4.75 lb/day and 9,730 lb/day respectively) were not exceeded; however the Total Nitrogen 30-Day Average IWLA (16.7 lb/day) was exceeded 11 times. The Σ waste load allocation (WLA) for all dischargers (Truckee Meadows Water Reclamation Facility, Sparks Marina Denitrification Facility, and the Vista Canyon Group) was not cumulatively exceeded, so there was no violation of the TMDL limit. From January 2008 to December 2013, the Nitrate permit limit (2.0 mg/L) was exceeded 13 times and the PCE permit limit (5.0 µg/L) was exceeded once.

All insufficiencies in the treatment system were addressed upon discovery, and confirmatory samples taken after repairs demonstrated that treated discharge returned to within permit limits. The discharges were a very small percentage of the total Truckee River flow, and the exceedances are unlikely to have caused any measurable effect on Truckee River quality, particularly when evaluated on a total load basis for the receiving water body. The facility is considered to be in substantial compliance with the active permit.

Receiving Water:

Outfall 01 (A-E) represents the treated groundwater discharged from Plant 2 to the Truckee River via the People's Ditch and the North Truckee Drain, approximately one (1) mile from the confluence with the Truckee River. Nevada Administrative Code (NAC) 445A.1688 water quality standards for the Truckee River at Lockwood Bridge apply to this reach of the river. Beneficial uses listed for this segment of the Truckee River include: aquatic life, water contact recreation, wildlife propagation, irrigation, stock watering, municipal or domestic supply, industrial supply, and non-contract recreation. The discharge is also subject to limitation in accordance with toxic material and standards for toxic materials applicable to designated waters as defined in NAC 445A.110 and NAC 445A.1236.

Outfall 02 (A) represents the treated groundwater discharged to phytoremediation plots, for the irrigation of trees cultivated to take up subsurface contaminants. This discharge is regulated as a discharge to groundwater and most of the discharge limitations assigned to Outfall 01 also apply to Outfall 02.

Summary of Changes From Previous Permit:

The Plant 1 FBRs were removed and replaced with GAC vessels with the Nevada Division of Environmental Protection (NDEP) approval dated March 18, 2013.

Per the Permittee's request, the Daily Maximum Flow has been decreased from 2.0 MGD to 1.9 MGD.

The Dissolved Lead monitoring requirement has been removed from this permit because the parameter has been reported as non-detect during monthly sampling since 2003. The contracted laboratory is certified to use EPA Methods 200.8 and SW6020a, which are appropriate test methods for this parameter, and the reporting limit is lower than the range expected in the water. The dissolved lead reporting limit of 5.00 µg/L is lower than the acute and chronic limits, 202 and 7.87 µg/L respectively, using the geometric mean of the hardness data reported by the Permittee. Together, this information justifies an exception to backsliding for the removal of this monitoring requirement.

Hardness has been sampled to confirm compliance with the Dissolved Lead discharge limit. Since the Dissolved Lead requirement has been removed from this permit, the hardness requirement has been removed as well.

The Total Ammonia monitoring requirement has been removed from this permit because the monthly sampling values reported by the Permittee over the past 6 years have typically been non-detect. During that time, Total Ammonia was detected 3 times, with values ranging between 0.11 and 0.44 mg/L. These values are lower than both the acute and chronic limits, 2.79 and 12.14 mg/L respectively, for Total Ammonia calculated using the geometric means of the pH and temperature data reported by the Permittee. This information justifies an exception to backsliding for the removal of this monitoring requirement.

In previous permits, temperature monitoring was required to confirm compliance with the Total Ammonia discharge limit. Since the Total Ammonia monitoring requirement has been removed from this permit, the temperature requirement has been removed as well. The Permittee is not required to meet the Truckee River temperature standards listed in NAC 445A.1688 at point of discharge (Outfall 01) because discharge is to the People's Ditch, which flows approximately one mile to the confluence with the Truckee River. Between January 2008 and December 2013, the temperature at Outfall 01 ranged between 17°C and 23°C. The time and distance for discharge to flow within the People's Ditch results in ambient equilibration of the discharge to temperatures similar to that of the Truckee River, and consequently, the discharge temperature does not present a reasonable potential to cause or contribute to a violation of water quality

standards.

Proposed Effluent Limitations:

During the period beginning on the effective date of this permit and lasting until the permit expires, the Permittee is authorized to discharge treated groundwater from Outfall 01 and Outfall 02. Discharge limitations can be found below.

Discharge Limitations Table for Sample Location 01A (External Outfall) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Methyl tert-butyl ether	Value		<= 40 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
Xylene ^[1]	Value		<= 200 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
Ethylbenzene	Value		<= 100 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
Toluene	Value		<= 100 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
Benzene	Value		<= 5 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
Hydrocarbons, total petroleum	Value		<= 1 Milligrams per Liter (mg/L)	Effluent Gross	01A	Monthly	DISCRT
Nitrogen, nitrate total (as N)	Value		<= 2 Milligrams per Liter (mg/L)	Effluent Gross	01A	Monthly	DISCRT
Solids, total dissolved	Daily Maximum	M&R Pounds per Day (lb/d)	M&R Milligrams per Liter (mg/L)	Effluent Gross	01A	Monthly	DISCRT
Solids, total dissolved	30 Day Average	M&R Pounds per Day (lb/d)	M&R Milligrams per Liter (mg/L)	Effluent Gross	01A	Monthly	DISCRT
pH, maximum	Daily Maximum		<= 8.5 Standard Units (SU)	Effluent Gross	001	Monthly	DISCRT
pH, minimum	Daily Minimum		>= 7.1 Standard Units (SU)	Effluent Gross	001	Monthly	DISCRT
Flow rate	Daily Maximum	M&R Million Gallons per Day		Effluent Gross	01A	Continuous	METER

Discharge Limitations Table for Sample Location 01A (External Outfall) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
		(Mgal/d)					
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Effluent Gross	01A	Continuous	METER
Phosphorus, total (as P)	30 Day Average	M&R Pounds per Day (lb/d)	M&R Milligrams per Liter (mg/L)	Effluent Gross	01A	Monthly	DISCRT
Nitrogen, total	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	01A	Monthly	DISCRT
Phosphorus, total (as P)	Daily Maximum	M&R Pounds per Day (lb/d)	M&R Milligrams per Liter (mg/L)	Effluent Gross	01A	Monthly	DISCRT
Vinyl chloride	Value		<= 2 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
Trihalomethane, tot.	Value		<= 100 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
Trichloroethylene	Value		<= 5 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
Tetrachloroethylene	Value		<= 5 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
Dichloromethane	Value		M&R Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT
1,2-Dichloroethane	Value		<= 5 Micrograms per Liter (ug/L)	Effluent Gross	01A	Monthly	DISCRT

Notes (Discharge Limitations Table):

- Total Xylene

Discharge Limitations Table for Sample Location 01A (External Outfall) To Be Reported Semi Annually^[1]

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Whole effluent toxicity	Value		M&R Percent Survival (% survival)	Effluent Gross	01A	Semiannual	COMPOS

Notes (Discharge Limitations Table):

1. Tests shall be conducted in April and October to coincide with periods generally accepted as representative of high and low flow in the Truckee River.

Discharge Limitations Table for Sample Location 01A (External Outfall) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	Annual Average	M&R Pounds per Day (lb/d)		Effluent Gross	01A	Annual	CALCTD
Solids, total dissolved	Annual Average	M&R Pounds per Day (lb/d)		Effluent Gross	01A	Annual	CALCTD

Discharge Limitations Table for Dissolved Oxygen Sample Location 01B (External Outfall) To Be Reported Monthly - (November-March)

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Oxygen, dissolved (DO)	Daily Minimum		>= 6.0 Milligrams per Liter (mg/L)	Effluent Gross	01B	Monthly	DISCRT

Discharge Limitations Table for Dissolved Oxygen Sample Location 01C (External Outfall) To Be Reported Monthly - (April-October)

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Oxygen, dissolved (DO)	Daily Minimum		>= 5.0 Milligrams per Liter (mg/L)	Effluent Gross	01C	Monthly	DISCRT

Discharge Limitations Table for Total Nitrogen Sample Location 01D (External Outfall) To Be Reported Monthly - (May-October)

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	30 Day Average	<= 16.7 Pounds per Day (lb/d)		Effluent Gross	01D	Monthly	CALCTD

Discharge Limitations Table for Total Nitrogen Sample Location 01E (External Outfall) To Be Reported Monthly - (November-April)

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	30 Day Average	M&R Pounds per Day (lb/d)		Effluent Gross	01E	Monthly	CALCTD

Discharge Limitations Table for Sample Location 02A (External Outfall) To Be Reported Monthly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Vinyl chloride	Value		<= 2 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
Trihalomethane, tot.	Value		<= 100 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
Trichloroethylene	Value		<= 5 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
Tetrachloroethylene	Value		<= 5 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
Dichloromethane	Value		M&R Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
1,2-Dichloroethane	Value		<= 5 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
Methyl tert-butyl ether	Value		<= 40 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
Xylene ^[1]	Value		<= 200 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
Ethylbenzene	Value		<= 100 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
Toluene	Value		<= 100 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
Benzene	Value		<= 5 Micrograms per Liter (ug/L)	Effluent Gross	02A	Monthly	DISCRT
			<= 1				

Discharge Limitations Table for Sample Location 02A (External Outfall) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Hydrocarbons, total petroleum	Value		Milligrams per Liter (mg/L)	Effluent Gross	02A	Monthly	DISCRT
Flow rate	Daily Maximum	M&R Million Gallons per Day (Mgal/d)		Effluent Gross	02A	Continuous	METER
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Effluent Gross	02A	Continuous	METER
Nitrogen, total	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	02A	Monthly	DISCRT
Phosphorus, total (as P)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	02A	Monthly	DISCRT
pH	Value		M&R Standard Units (SU)	Effluent Gross	02A	Monthly	DISCRT
Oxygen, dissolved (DO)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	02A	Monthly	DISCRT
Nitrogen, nitrate total (as N)	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	02A	Monthly	DISCRT
Solids, total dissolved	Value		M&R Milligrams per Liter (mg/L)	Effluent Gross	02A	Monthly	DISCRT

Notes (Discharge Limitations Table):

- Total Xylene

Discharge Limitations Table for Sample Location 03A (Sum) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	30 Day Average	<= 1.6 Million Gallons per Day (Mgal/d)		Effluent Gross	03A	Continuous	METER
Flow rate	Daily Maximum	<= 1.9 Million Gallons per Day (Mgal/d)		Effluent Gross	03A	Continuous	METER

Waste Load Allocation (WLA) Receiving Water Table

Receiving Water
TRUCKEE RIVER

Permittee Waste Load Allocation (WLA) Outfall Table

Outfall
Outfall 01D Latitude: 39.5288000N Longitude: -119.724500W
Outfall 01B Latitude: 39.5288000N Longitude: -119.724500W
Outfall 01E Latitude: 39.5288000N Longitude: -119.724500W
Outfall 01A Latitude: 39.5288000N Longitude: -119.724500W
Outfall 01C Latitude: 39.5288000N Longitude: -119.724500W

Waste Load Allocation (WLA) Dischargers Table

Dischargers Facility
NV0020150 - TRUCKEE MEADOWS WATER RECLAMATION FACILITY (05/08/2012 - 05/07/2017)
NV0022918 - SPARKS MARINA DENITRIFICATION FACILITY (03/22/2013 - 03/21/2018)
NV0020893 - SPARKS SOLVENT/FUEL REMEDIATION SITE (04/01/2015 - 03/31/2020)

Cumulative Waste Load Allocation (WLA) Table

Constituent (lbs/day)	Start Date	End Date	Total Max Daily Load (TMDL) Allowed	Discharger	Individual Waste Load Allocation (IWLA)	ΣWLA
Nitrogen, total ^[1]	July, 2015	June, 2020	1000	NV0020150 - TRUCKEE MEADOWS WATER RECLAMATION FACILITY (05/08/2012 - 05/07/2017)	500	550
				NV0020893 - SPARKS SOLVENT/FUEL REMEDIATION SITE (04/01/2015 - 03/31/2020)	16.70	
				NV0022918 - SPARKS MARINA DENITRIFICATION FACILITY (03/22/2013 - 03/21/2018)	33.30	
Phosphorus, total (as P)	July, 2015	June, 2020	214	NV0020150 - TRUCKEE MEADOWS WATER RECLAMATION FACILITY (05/08/2012 - 05/07/2017)	134	138.75
				NV0020893 - SPARKS SOLVENT/FUEL REMEDIATION SITE (04/01/2015 - 03/31/2020)	4.75	
				NV0022918 - SPARKS MARINA DENITRIFICATION FACILITY (03/22/2013 - 03/21/2018)	0	
Solids, total dissolved	July, 2015	June, 2020	900528	NV0020150 - TRUCKEE MEADOWS WATER RECLAMATION FACILITY (05/08/2012 - 05/07/2017)	120168	149288
				NV0020893 - SPARKS SOLVENT/FUEL REMEDIATION SITE (04/01/2015 - 03/31/2020)	9730	
				NV0022918 - SPARKS MARINA DENITRIFICATION FACILITY (03/22/2013 - 03/21/2018)	19390	

Notes (Cumulative Waste Load Allocation (WLA) Table):

1. The 30-day Average Load applies from May 1st through October 31st and the Annual Average Load applies from November 1st through April 30th. The load information shall be submitted with the 4th Quarter DMR.

Waste Load Allocation:

The WLAs can be found in the Cumulative Waste Load Allocation Table. The WLA section allows discharge flexibility among the Permittee, Truckee Meadows Water Reclamation Facility (TMWRF), and the Sparks Marina Denitrification Facility (SMDF). The individual Permittees have first rights to their assigned IWLA and any remaining allocations may be shared by the dischargers. No discharger shall be penalized for the IWLA violations of the other dischargers. Similar transfer language has been incorporated into the TMWRF and SMDF permits. The proposed permit limits based on the IWLA have been retained from the previous permit.

Rationale for Permit Requirements:

Flow: Discharge flow is limited to the design discharge of the groundwater treatment system, which includes a 30-Day Average of 1.6 MGD and a Daily Maximum of 1.9 MGD.

pH: This discharge limitation is required to confirm compliance with the pH water quality standard listed under NAC 445A.1688.

Total Phosphorus (as P): The 30-Day Average IWLA for the Vista Canyon Group is 4.75 lb/day and the Σ WLA for the three dischargers is 138.75 lb/day. An IWLA and Σ WLA for Total Phosphorous have been assigned to ensure preservation of the TMDL assigned for the Truckee River. Compliance with the preeminent mass loading criteria satisfies compliance with the related water quality standard for Total Phosphates (as P) listed under NAC 445A.1688.

Total Nitrogen as N: From May 1st through October 31st the 30-Day Average IWLA for the Vista Canyon Group is 16.7 lb/day. The Annual Average Load is applied from November 1st through April 30th. The Σ WLA for the three dischargers is 550 lb/day. An IWLA and Σ WLA for Total Nitrogen have been assigned to ensure compliance with the TMDL assigned for the Truckee River.

Total Dissolved Solids (TDS): The Annual Average IWLA for the Vista Canyon Group is 9,730 lb/day and the Σ WLA for the three dischargers is 149,288 lb/day. An IWLA and Σ WLA for TDS have been assigned to ensure compliance with the TMDL assigned for the Truckee River. Compliance with the mass loading criteria also satisfies compliance with the TDS water quality standard listed under NAC 445A.1688.

Nitrate as N: This monitoring parameter is preserved in the proposed renewal and is limited in accordance with the beneficial use standard listed under NAC 445A.1688.

Dissolved Oxygen: The dissolved oxygen discharge limitation is in accordance with the beneficial uses water quality standard listed under NAC 445A.1688.

Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), and Total Petroleum Hydrocarbons: Since the project involves the remediation of petroleum compounds, which include these sentinel/indicator compounds, discharge limitations for these constituents have been preserved. These discharge limitations are required to ensure proper treatment prior to discharge.

Methyl tertiary butyl ether (MTBE): Neither NAC 445A.1688 nor NAC 445A.1236 listing Truckee River water quality standards and standards for toxic materials, respectively, include a standard for MTBE. Current guidance documentation suggests action levels at 20 or 200 $\mu\text{g/L}$, depending on exposure and potential receptors, but these concentrations are not codified standards. EPA Taste and Odor thresholds cite a quantitative range of 20 to 40 $\mu\text{g/L}$ and numerous studies conducted since approximately 1990 indicate that the 40 $\mu\text{g/L}$ limitation represents a relatively conservative value with respect to both human and ecological toxicity. Documentation on file also indicates that this value is comparable to the regulations and guidelines adopted for MTBE in other western states. The discharge limitation for MTBE established in the 1998 Permit was based on guidance from the EPA Region IX. The discharge limitation of 40 $\mu\text{g/L}$, agreed to at that time, falls within the range of concentration that the EPA considers will "protect consumer acceptance of the water resource" and "provide a large margin of exposure (safety) from toxic effects." In conjunction with this empirical limitation, Whole Effluent Toxicity (WET) testing is required to confirm the absence of quantifiable toxicity characteristics in the discharge. Results of WET tests compiled throughout the five (5)-year permit term clearly indicate the cumulative discharge effects are not toxic to indicator aquatic species. Given the cumulative data on file, it can be concluded that the 40 $\mu\text{g/L}$ MTBE discharge limitation has been and remains an effective limitation for the protection of existing water quality and beneficial uses for the Truckee River.

1,2-Dichloroethane (1,2-DCA), Dichloromethane (methylene chloride), Tetrachloroethylene (PCE), Trichloroethylene (TCE), Trihalomethanes, and Chloroethylene (vinyl chloride): Discharge limitations for these constituents remain preserved in the proposed permit renewal and are primarily based on the Municipal or Domestic Supply standards listed in NAC 445A.1236.

Whole Effluent Toxicity Testing: The requirement to routinely conduct WET testing has been preserved under the authority of NAC 445A.121 and is required to confirm the absence of quantifiable toxicity

characteristics in the discharge.

Volatile Organics: This monitoring requirement is included to ensure that the installation and use of new wells does not result in the inadvertent discharge of unidentified, but commonly encountered, fuel-related pollutants that could pose an environmental threat to the Truckee River. Profiling the discharge for Volatile Organics only when new sources of pumped groundwater are introduced will substantiate the absence of unexpected pollutants, while minimizing the routine analytical burden.

The water quality standards found in NAC 445A.1688 include: Temperature (ΔT), Total Ammonia, Total Suspended Solids (TSS), Turbidity, Color, Chlorides, Sulfate, Sodium, Alkalinity (as CaCO_3), E. coli and Fecal Coliform. These parameters are not anticipated to be present in the discharge, so no limitations for these parameters have been incorporated in this permit.

The water quality standards found in NAC 445A.1688 for the three TMDL parameters (TDS, Total Nitrogen, and Total Phosphorus) are typically more stringent than those presented in the TMDL when converting the mass-based WLAs to concentrations using the permit flow limit. Although the more stringent limit is typically imposed in a permit, the assimilation capacity for the three constituents was built into the TMDL and allows for the use of the TMDL-based limits in this permit.

WET Testing:

WET testing refers to the aggregate toxic effect to aquatic organisms from all pollutants in the effluent. WET tests measure the degrees of response of exposed aquatic test organisms to an effluent. This permit requires acute toxicity testing only. During the period from January 2008 through December 2013, the WET testing indicated no effluent toxicity. This proposed permit provision is retained from the previous permit.

Special Conditions:

See Special Approvals/Conditions Table.

SA – Special Approvals / Conditions Table

Item #	Description
-1	At least two weeks prior to operation of any new extraction well, the Permittee shall notify the Bureau of Water Pollution Control of their intent to operate. "New wells" are those extraction wells installed after the issue date of this permit.
2	Within 30 days of the commencement of operation of any new well the Permittee shall submit to the Bureau of Water Pollution Control laboratory results of a Volatile Organic Compound analysis for the well discharge. The aromatic and halogenated volatile organics list is included in Attachment A. Analyses shall be conducted using EPA Method 8021/601/ 602 or equivalent. "New wells" are those extraction wells installed after the issue date of this permit. Any time a new well is incorporated into the groundwater recovery program, a sample of the discharge must be collected and profiled for volatile organics.
3	The Permittee shall notify the Administrator of the Division and the Pyramid Lake Paiute Tribe within twenty-four hours of any upset, bypass, or any other discharge not expressly authorized under the terms of this permit.
4	To maintain consistency with the 2009 NV0020893 permit, condition B.WET.1.3.1. does not apply to this permit. Acute toxicity testing shall be completed semi-annually (April and October), and the results reported with the subsequent Quarterly DMR (July) or Annual Report (January).

Flow:

Together, the 30-Day Average flow for Outfalls 01 and 02 is 1.6 MGD and the Daily Maximum is 1.9 MGD.

Corrective Action Sites:

There are six remediation sites managed by the Washoe County Health District (WCHD) and one site (SSFS) managed by the NDEP-Bureau of Corrective Actions (BCA) that are located within one (1) mile of this facility. The WCHD and the BCA do not expect the permitted discharge to have adverse effects on the remediation sites.

Wellhead Protection Program:

This facility is located within a 6,000-foot drinking water protection area and a 20-year wellhead protection area. With the renewal of this permit no impacts to drinking water are anticipated.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	Within 60 days of permit issuance, the Permittee shall submit two (2) copies of an updated Operation and Maintenance (O&M) Manual for review by the Division. The O&M Manual shall be prepared by a Division-approved qualified person.	8/29/2015

Deliverable Schedule:

DLV– Deliverable Schedule for Reports, Plans, and Other Submittals

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly Discharge Monitoring Reports	Quarterly	10/28/2015
2	Whole Effluent Toxicity Report	Semi Annually	1/28/2016
3	Annual Report	Annually	1/28/2016

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to surface waters of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Reno Gazette Journal, Sparks Tribune** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **6/22/2015**, a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined to be appropriate. All public hearings must be conducted to accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination:

The Division has made the tentative determination to issue / re-issue the proposed 5-year permit.

Prepared by: **Briana Johnson**

Date: **5/18/2015**

Title: **Environmental Scientist**

**Attachment A
Priority Pollutants**

<u>BASE NEUTRAL EXTRACTIBLES</u>		<u>VOLATILE ORGANICS</u>		<u>PESTICIDES</u>		<u>ACID EXTRACTABLES</u>		<u>METALS</u>		<u>DIOXINS</u>		<u>OTHER</u>	
Storet Code	Name	Storet Code	Name	Storet Code	Name	Storet Code	Name	Storet Code	Name	Storet Code	Name	Storet Code	Name
34551	1,2,4-Trichlorobenzene	34506	1,1,1-Trichloroethane	39310	4,4-DDD	34621	2,4,6-Trichlorophenol	01268	Antimony	34675	2,3,7,8-TCDD	00948	Asbestos
34536	1,2-Dichlorobenzene	34516	1,1,2,2-Tetrachloroethane	39320	4,4-DDE	34601	2,4-Dichlorophenol	00978	Arsenic			00720	Cyanide, total
34346	1,2-Diphenylhydrazine	34511	1,1,2-Trichloroethane	39300	4,4-DDT	34606	2,4-Dimethylphenol	00998	Beryllium				
34566	1,3-Dichlorobenzene	34496	1,1-Dichloroethane	39330	Aldrin	34616	2,4-Dinitrophenol	01113	Cadmium				
34571	1,4-Dichlorobenzene	34501	1,1-Dichloroethylene	39336	Alpha-BHC	34586	2-Chlorophenol	01118	Chromium				
34611	2,4-Dinitrotoluene	32103	1,2-Dichloroethane	34361	Endosulfan I (alpha)	03615	2-Methyl-4,6-dinitrophenol	01119	Copper				
34626	2,6-Dinitrotoluene	34541	1,2-Dichloropropane	39338	Beta-BHC	34591	2-Nitrophenol	01114	Lead				
34581	2-Chloronaphthalene	34546	Trans-1,2-Dichloroethylene	34356	Endosulfan II (beta)	70012	4-Chloro-3-methylphenol	71901	Mercury				
34631	3,3-Dichlorobenzidine	77163	1,3-Dichloropropene (mixed)	39350	Chlordane (Technical)	34646	4-Nitrophenol	01074	Nickel				
34636	4-Bromophenyl phenyl ether	34576	2-Chloroethyl vinyl ether	34198	Delta-BHC	39032	Pentachlorophenol	00981	Selenium				
34641	4-Chlorophenyl phenyl ether	34210	Acrolein	39380	Dieldrin	34694	Phenol	01079	Silver				
34205	Acenaphthene	34215	Acrylonitrile	34351	Endosulfan sulfate			00982	Thallium				
34200	Acenaphthylene	34030	Benzene	39390	Endrin			01094	Zinc				
34220	Anthracene	32104	Bromoform	34366	Endrin aldehyde								
39120	Benzidine	32102	Carbon tetrachloride	39344	Gamma-BHC (Lindane)								
34526	Benzo(a)anthracene	34301	Chlorobenzene	39410	Heptachlor								
34247	Benzo(a)pyrene	85811	Chloroethane	39420	Heptachlor epoxide								
34230	Benzo(b)fluoranthene	32106	Chloroform	34671	Aroclor (PCB) 1016								
34521	Benzo(g,h,i)perylene	32105	Dibromochloromethane	39488	Aroclor (PCB) 1221								
34242	Benzo(k)fluoranthene	32101	Bromodichloromethane	39492	Aroclor (PCB) 1232								
34278	Bis(2-Chloroethoxy) methane	34371	Ethylbenzene	39496	Aroclor (PCB) 1242								
34273	Bis(2-chloroethyl) ether	34413	Bromomethane	39500	Aroclor (PCB) 1248								
34283	Bis(2-Chloroisopropyl) ether	34418	Chloromethane	39504	Aroclor (PCB) 1254								
39100	Bis(2-ethylhexyl) phthalate	34423	Dichloromethane	39508	Aroclor (PCB) 1260								
34292	Butyl benzyl phthalate	34475	Tetrachloroethylene	39400	Toxaphene								
34320	Chrysene	34010	Toluene										
34556	Dibenzo(a,h)anthracene	39180	Trichloroethylene										
34336	Diethyl phthalate	39175	Vinyl chloride										
34341	Dimethyl phthalate												
39110	Di-n-butyl phthalate												
34586	Di-n-octyl phthalate												
34376	Fluoranthene												
34381	Fluorene												
39700	Hexachlorobenzene												
34391	Hexachlorobutadiene												
34386	Hexachlorocyclopentadiene												
34396	Hexachloroethane												
34403	Indeno(1,2,3-cd)pyrene												
34408	Isophorone												
34696	Naphthalene												
34447	Nitrobenzene												
34438	N-Nitrosodimethylamine												
34428	N-Nitrosodi-n-propylamine												
34433	N-Nitrosodiphenylamine												
34461	Phenanthrene												
34469	Pyrene												

Note: Priority Pollutants shall be analyzed using approved Environmental Protection Agency (EPA) Methods, and/or an appropriate combination of these methods to verify compliance with applicable water quality standards.

4/27/2010