FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: ALAMO SEWER & WATER GENERAL IMPROVEMENT DISTRICT
PO BOX 418
ALAMO, NV - 89001

Permit Number: NS0030019

Location: TOWN OF ALAMO WASTEWATER TREATMENT FACILITY, LINCOLN
LOCATED IN THE SOUTHWEST TOWN LIMITS OF ALAMO, ALAMO, NV - 89001
LATITUDE: 37.357778, LONGITUDE: -115.171389
TOWNSHIP: 7S, RANGE: 61E, SECTION: 8

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	INFLUENT	Influent Structure		ALAMO	NV	89001	LINCOLN	37.357778	-115.171389	GROUNDWATER
002	EFFLUENT	External Outfall		ALAMO	NV	89001	LINCOLN	37.357778	-115.171389	GROUNDWATER
003	IRRIGATION FIELDS	Land Application Site		ALAMO	NV	89001	LINCOLN	37.357587	-115.165815	GROUNDWATER
MW1	MW-1	Monitoring Well		ALAMO	NV	89001	LINCOLN	37.357997	-115.172250	GROUNDWATER
MW2	MW-2	Monitoring Well		ALAMO	NV	89001	LINCOLN	37.358042	-115.169583	GROUNDWATER
MW3	MW-3	Monitoring Well		ALAMO	NV	89001	LINCOLN	37.353611	-115.165833	GROUNDWATER
MW4	MW-4	Monitoring Well		ALAMO	NV	89001	LINCOLN	37.358167	-115.166881	GROUNDWATER
MW5	MW-5	Monitoring Well		ALAMO	NV	89001	LINCOLN	37.356592	-115.014594	GROUNDWATER

General:

The Alamo Sewer & Water General Improvement District operates the Town of Alamo Wastewater Treatment Facility (WWTF), located in the southwest town limits of Alamo, Lincoln County, Nevada. The WWTF consists of a lift station and several lined ponds, including two primary aerated ponds, two secondary aerated ponds, and a storage pond. Secondary-treated effluent from the storage pond is discharged via flood irrigation to two agricultural reuse sites (Hatch Property and Stirling Property). The WWTF has a design treatment capacity of 0.071 million gallons per day (MGD) and a current operational flow of 0.045 MGD. This permit renewal allows for continued WWTF operation and reuse irrigation.

Discharge Characteristics:

The discharge consists of secondary-treated effluent with the following average characteristics, calculated from parameter values reported from the fourth quarter of 2012 through the second quarter of 2015:

Fecal Coliform: 64 MPN/100mL
CBOD: 31 mg/L
Total Suspended Solids: 62 mg/L
Total Nitrogen: 8.3 mg/L
pH: 9.45 standard units

Receiving Water:

The receiving water is groundwater of the State. Groundwater in the area flows to the southeast. Average values for groundwater monitoring results from the fourth quarter of 2012 through the second quarter of 2015 are listed below.

MW-1
Depth: 99 feet
Total Dissolved Solids (TDS): 709 mg/L
Chloride: 120 mg/L
Nitrate: 10.4 mg/L
Total Nitrogen: 10.6 mg/L

MW-2
Depth: 95 feet
TDS: 745 mg/L
Chloride: 97 mg/L
Nitrate: 5.9 mg/L
Total Nitrogen: 6.1 mg/L

MW-3
Depth: 19 feet
TDS: 908 mg/L
Chloride: 112 mg/L
Nitrate: 8.5 mg/L
Total Nitrogen: 8.6 mg/L

MW-4
Depth: 19 feet
TDS: 945 mg/L
Chloride: 104 mg/L
Nitrate: 7.2 mg/L
Total Nitrogen: 7.3 mg/L

MW-5
Depth: 6 feet
TDS: 1409 mg/L
Chloride: 119 mg/L
Nitrate: 0.13 mg/L
Total Nitrogen: 0.78 mg/L

Summary of Changes From Previous Permit:

The requirement to monitor and report the groundwater elevation at monitoring wells MW-1 through MW-5 has been removed from the permit.

The requirement to monitor and report nitrate as nitrogen at monitoring wells MW-1 through MW-5 has been removed from the permit; nitrate is a component of total nitrogen, which is limited to 10 mg/L at monitoring wells MW-1 through MW-5.

The requirement to report actual nitrogen loading and cumulative annual nitrogen loading to date has been removed; these parameters are included in the Effluent Management Plan.

The requirement to monitor and report application volume has been removed; the requirement to monitor and report flow rate (application volume per day) has been retained.

Due to the new naming conventions at the Nevada Division of Environmental Protection (NDEP), Bureau of Water Pollution Control, the permit number has been changed from NEV30019 to NS0030019. This change does not reflect a change in the type of permit being issued.

Proposed Effluent Limitations:

The discharge shall be limited and monitored by the Permittee as specified below:

WWTP Discharge Limitations Table for Sample Location 001 (Influent) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Flow rate	Daily Maximum	<= 0.071 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER
Flow rate	30 Day Average	<= 0.071 Million Gallons per Day (Mgal/d)		Raw Sewage Influent	001	Continuous	METER

WWTP Discharge Limitations Table for Sample Location 001 (Influent) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent[1]	001	Quarterly	DISCRT
Solids, total suspended	30 Day Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent[1]	001	Quarterly	DISCRT
BOD, carbonaceous, 05 day, 20 C	Daily Maximum		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent[1]	001	Quarterly	DISCRT
BOD, carbonaceous, 05 day, 20 C	30 Day Average		M&R Milligrams per Liter (mg/L)	Raw Sewage Influent[1]	001	Quarterly	DISCRT

Notes (WWTP Discharge Limitations Table):

1. Influent samples shall be collected prior to discharge into the aerated treatment pond.

Groundwater Monitoring Wells Table for Sample Location Mw1 (Monitoring Well Mw-1) To Be Reported Quarterly[1]

	Discharge Limitations			Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	MW1	Quarterly	VISUAL[2]
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW1	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW1	Quarterly	DISCRT
Nitrogen, total	Quarterly Maximum		<= 10.0 Milligrams per Liter (mg/L)	Groundwater	MW1	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Groundwater samples shall be taken only after purging at least three well volumes of groundwater from the monitoring well.
2. Field measurement

Groundwater Monitoring Wells Table for Sample Location Mw2 (Monitoring Well Mw-2) To Be Reported Quarterly[1]

	Discharge Limitations			Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	MW2	Quarterly	VISUAL[2]
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW2	Quarterly	DISCRT
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW2	Quarterly	DISCRT
Nitrogen, total	Quarterly Maximum		<= 10.0 Milligrams per Liter (mg/L)	Groundwater	MW2	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Groundwater samples shall be taken only after purging at least three well volumes of groundwater from the monitoring well.
2. Field measurement

Groundwater Monitoring Wells Table for Sample Location Mw3 (Monitoring Well Mw-3) To Be Reported Quarterly[1]

	Discharge Limitations			Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	MW3	Quarterly	VISUAL[2]
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT
Nitrogen, total	Quarterly Maximum		<= 10.0 Milligrams per Liter (mg/L)	Groundwater	MW3	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Groundwater samples shall be taken only after purging at least three well volumes of groundwater from the monitoring well.
2. Field measurement

Groundwater Monitoring Wells Table for Sample Location Mw4 (Monitoring Well Mw-4) To Be Reported Quarterly[1]

	Discharge Limitations			Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Nitrogen, total	Quarterly Maximum		<= 10.0 Milligrams per Liter (mg/L)	Groundwater	MW4	Quarterly	DISCRT
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	MW4	Quarterly	VISUAL[2]
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW4	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW4	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Groundwater samples shall be taken only after purging at least three well volumes of groundwater from the monitoring well.
2. Field measurement

Groundwater Monitoring Wells Table for Sample Location Mw5 (Monitoring Well Mw-5) To Be Reported Quarterly[1]

	Discharge Limitations			Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Nitrogen, total	Quarterly Maximum		<= 10.0 Milligrams per Liter (mg/L)	Groundwater	MW5	Quarterly	DISCRT
Depth to water level ft below landsurface	Quarterly Maximum	M&R Feet (ft)		Groundwater	MW5	Quarterly	VISUAL[2]
Solids, total dissolved	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW5	Quarterly	DISCRT
Chloride (as Cl)	Quarterly Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	MW5	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Groundwater samples shall be taken only after purging at least three well volumes of groundwater from the monitoring well.
2. Field measurement

Re-use Discharge Limitations Table for Sample Location 002 (Effluent) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Coliform, fecal general	Daily Maximum		<= 200 Most Probable Number per 100ml T (MPN/100mL)	Effluent Gross[1]	002	Monthly[2]	DISCRT
Coliform, fecal general	30 Day Average		<= 200 Most Probable Number per 100ml T (MPN/100mL)	Effluent Gross[1]	002	Monthly[2]	DISCRT

Notes (Re-use Discharge Limitations Table):

1. Effluent samples shall be collected after overflow from the aerated treatment ponds but prior to discharge into the storage pond.
2. From March through October only.

Re-use Discharge Limitations Table for Sample Location 002 (Effluent) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
BOD, carbonaceous, 05 day, 20 C	Daily Maximum		<= 45 Milligrams per Liter (mg/L)	Effluent Gross[1]	002	Quarterly	DISCRT
BOD, carbonaceous, 05 day, 20 C	30 Day Average		<= 45 Milligrams per Liter (mg/L)	Effluent Gross[1]	002	Quarterly	DISCRT
Solids, total suspended	Daily Maximum		<= 90 Milligrams per Liter (mg/L)	Effluent Gross[1]	002	Quarterly	DISCRT
Solids, total suspended	30 Day Average		<= 90 Milligrams per Liter (mg/L)	Effluent Gross[1]	002	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Effluent Gross[1]	002	Quarterly	DISCRT
Nitrogen, total	30 Day Average		M&R Milligrams per Liter (mg/L)	Effluent Gross[1]	002	Quarterly	DISCRT
pH, maximum	Daily Maximum		<= 9.0 Standard Units (SU)	Effluent Gross[1]	002	Quarterly	DISCRT
pH, minimum	Daily Minimum		>= 6.0 Standard Units (SU)	Effluent Gross[1]	002	Quarterly	DISCRT

Notes (Re-use Discharge Limitations Table):

1. Effluent samples shall be collected after overflow from the aerated treatment ponds but prior to discharge into the storage pond.

Re-use Discharge Limitations Table for Sample Location 003 (Irrigation Fields) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Flow rate	Monthly Total	M&R Million Gallons per Day (Mgal/d)		Prior to Reuse[1]	003	Monthly	METER

Notes (Re-use Discharge Limitations Table):

1. Discharge outfall to fields

Rationale for Permit Requirements:

Influent Flow Rate: The influent flow rate limits are based on the current operational flow values indicated in the permit renewal application.

CBOD5: The 30-day average limit and required minimum treatment efficiency (percent removal) are based on the secondary treatment standards in 40 Code of Federal Regulations (CFR) § 133.102.

Total Suspended Solids (TSS) : The 30-day average limit and required minimum treatment efficiency (percent removal) are based on the secondary treatment standards in 40 CFR § 133.102.

Fecal Coliform: The concentration of fecal coliform in the effluent is limited to prevent degradation of the underlying groundwater.

pH: This limit is based on the secondary treatment standards in Nevada Administrative Code (NAC) 445A.275.

Total Nitrogen: This reporting requirement is included to account for the total mass of nitrogen applied to the irrigation fields.

Irrigation Flow Rate : Irrigation flow rate is monitored and reported to prevent ponding and runoff of the permitted discharge.

Groundwater is monitored quarterly to ensure that it is not being negatively impacted by the permitted discharge.

Fecal Coliform:

Daily Maximum ≤ 200 MPN/100mL

30-Day Average ≤ 200 MPN/100mL

Special Conditions:

Substantial compliance with the current permit is a condition of permit renewal.

SA – Special Approvals / Conditions Table

There are no Special Approval / Condition items

Flow:

Daily Maximum ≤ 0.071 MGD

30-Day Average ≤ 0.071 MGD

Corrective Action Sites:

There are no Bureau of Corrective Actions remediation sites located within one mile of the WWTF.

Wellhead Protection Program:

The WWTF is not located within a Wellhead Protection Area. The WWTF is located within one 1,000-foot Drinking Water Protection Area (DWPA), three 3,000-foot DWPAs, and one 6,000 foot DWPA. The irrigation fields are located within four 1,000-foot DWPAs and one 6,000-foot DWPA. The permitted discharge is not expected to negatively impact the DWPAs.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit a revised Operation and Maintenance (O&M) Manual to the Division. The O&M Manual shall be prepared in accordance with guidance document *WTS-2: Minimum Information Required for an Operation and Maintenance Manual for a Wastewater Treatment Plant*. If the Permittee determines that no updates to the O&M Manual are necessary, the Permittee shall submit, in lieu of an updated O&M Manual, a letter to the Division stating that no changes have been made to the existing O&M Manual.	4/28/2016
2	The Permittee shall submit a revised Effluent Management Plan (EMP) to the Division. The EMP shall be prepared and wet-stamped by a Nevada Registered Professional Engineer in accordance with guidance document *WTS-1B: General Criteria for Preparing an Effluent Management Plan*.	4/28/2016

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly Discharge Monitoring Reports	Quarterly	4/28/2016
2	Annual Report	Annually	1/28/2017

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to groundwater of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Las Vegas Review Journal, Lincoln County Record** 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. **12/25/2015** , 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: **Alan Pineda**
Date: **11/12/2015**
Title: **Staff I Associate Engineer**