NEW MEXICO
ENVIRONMENT DEPARTMENT

Harold Runnels Building
1190 South St. Francis Drive (87505)
P.O. Box 5469, Santa Fe, NM 87502-5469
Phone (505) 827-0187 Fax (505) 827-0160
www.env.nm.gov

SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

Certified Mail – Return Receipt Requested

June 20, 2016

Mr. Larry Hathaway, President
Harper Valley Home Owners Association
90 CR 6050, NBU # 1001
Farmington, New Mexico 87401

Re: **Minor Non-Municipal; SIC 4952; NPDES Compliance Evaluation Inspection; Harper Valley Homeowners Association; NM0029025; May 19, 2016**

Dear Mr. Hathaway:

Enclosed please find a copy of the report and check list for the referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U.S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas for their review. These inspections are used by USEPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with requirements of the federal Clean Water Act.

Introduction, treatment scheme, and problems noted during this inspection are discussed in the "Further Explanations" section of the inspection report.

You are encouraged to review the inspection report, required to correct any problems noted during the inspection, and advised to modify your operational and/or administrative procedures, as appropriate. If you have comments on or concerns with the basis for the findings in the NMED inspection report, please contact us (see the address below) in writing within 30 days from the date of this letter. Further, you are encouraged to notify in writing both the USEPA and NMED regarding modifications and compliance schedules at the addresses below:

Racquel Douglas
US Environmental Protection Agency, Region VI
Enforcement Branch (6EN-WM)
Fountain Place
1445 Ross Avenue
Dallas, Texas 75202-2733

Bruce Yurdin
New Mexico Environment Department
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

If you have any questions about this inspection report, please contact Erin Trujillo at 505-827-0418 or at erin.trujillo@state.nm.us.

Sincerely,

/s/Bruce J. Yurdin

Bruce J. Yurdin
Program Manager
Point Source Regulation Section
Surface Water Quality Bureau

cc: Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
Racquel Douglas, USEPA (6EN-WM) by e-mail
Brent Larsen and Tung Nguyen, USEPA (6WQ-PP) by e-mail
Gladys Gooden-Jackson, USEPA (6EN-WC) by e-mail
Robert Italiano, NMED District II by e-mail

EPA

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

NPDES Compliance Inspection Report

Section A: National Data System Coding

1	Transaction Code	2	NPDES	11	12	yr/mo/day	17	18	Inspec. Type	19	Inspector	20	Fac Type
	N	5	NM0002902 5			160519			C		S		2

Remarks: MINOR WASTEWATER TREATMENT

67	Inspection Work Days	69	70	Facility Evaluation Rating	71	BI	72	QA	73	74	75	Reserved	80
			1			N		N					

Section B: Facility Data

Name and Location of Facility Inspected *(For industrial users discharging to POTW, also include POTW name and NPDES permit number)*	Entry Time /Date	Permit Effective Date
Harper Valley Home Owners Association Waste Water Treatment Plant (WWTP). From Farmington travel US 64 west, turn south/west onto CR 489/CR 6100, turn south/enter subdivision at sign onto CR 6050, turn left/east onto CR 6070, travel to end of the road, take unpaved path to plant. San Juan County.	~1350 hours / 05/19/2016	November 1, 2014
	Exit Time/Date ~1545 hours / 05/19/2016	Permit Expiration Date October 31, 2019

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)	Other Facility Data
See below	**Outfall** Latitude 36.72276° Longitude -108.29934° SIC 4952
Name, Address of Responsible Official/Title/Phone and Fax Number Mr. Larry Hathaway, President / Harper Valley Home Owners Association, 90 CR 6050, NBU # 1001, Farmington, New Mexico 87401 / 505-598-9624	Contacted Yes * No

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	**Permit**	S	**Flow Measurement**	U	**Operations & Maintenance**	N	**CSO/SSO**
U	**Records/Reports**	U	**Self-Monitoring Program**	M	**Sludge Handling/Disposal**	N	**Pollution Prevention**
U	**Facility Site Review**	M	**Compliance Schedules**	N	**Pretreatment**	N	**Multimedia**
U	**Effluent/Receiving Waters**	U	**Laboratory**	N	**Storm Water**	N	**Other:**

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

1. See attached report and further explanations.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone/Fax	Date
Erin S. Trujillo */s/Erin S. Trujillo*	**NMED/SWQB/505-827-0418**	**06/20/2016**
Signature of Management QA Reviewer **Sarah Holcomb** /s/Sarah Holcomb	**Agency/Office/Phone and Fax Numbers** **NMED/SWQB/505-827-2798**	**Date** **06/20/2016**

Harper Valley Homeowners Association
Compliance Evaluation Inspection
NPDES Permit No. NM0029025
May 19, 2016

Further Explanations

Introduction

On May 19, 2016, a Compliance Evaluation Inspection (CEI) was conducted by Erin S. Trujillo of the State of New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB) at the Harper Valley Home Owners Association (Harper Valley HOA) private domestic Waste Water Treatment Plant (WWTP) at Kirtland in San Juan County, New Mexico. This facility is classified as a minor discharger under the federal Clean Water Act (CWA), Section 402 National Pollutant Discharge Elimination System (NPDES) permit program and was assigned permit number NM0029025. The facility has a design capacity of 0.096 million gallons per day (MGD).

Discharges are to San Juan River in Segment 20.6.4.401 New Mexico Administrative Code (NMAC) State of New Mexico Standards for Interstate and Intrastate Surface Water. Designated uses of this segment are public water supply, industrial water supply, irrigation, livestock watering, wildlife habitat, primary contact, marginal coldwater aquatic life and warmwater aquatic life. In the USEPA approved 2014 - 2016 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated List, San Juan River, from the Navajo Nation boundary at the Hogback upstream to its confluence with the Animas river, is listed as not supporting marginal coldwater aquatic life and primary contact. Listed causes are sedimentation/siltation, turbidity, and E.coli bacteria. Probable sources include, among other sources, municipal point source discharges.

NMED performs a certain number of CEI's for the U.S. Environmental Protection Agency (USEPA) each year. The purpose of this inspection is to provide USEPA with information to evaluate the permittee's compliance with the NPDES permit. This report is based on review of files maintained and provided by the permittee and NMED, on-site observation by NMED personnel, and information provided by the permittee's representative.

Upon arrival at the facility of the announced inspection at approximately 1350 hours on May 19, 2016, Ms. Trujillo, made introductions, presented credentials and explained the purpose of the inspection to Mr. Larry Hathaway, President, Harper Valley HOA. The permittee's WWTP operator, Mr. Mike West, was not present during this CEI. Mr. Hathaway and Ms. Trujillo toured the plant and lift station. According to Mr. Hathaway, there have been no changes at the plant since the last NPDES CEI on June 12, 2014. Except for the operator's April 11 thru May 18, 2016 daily log entries on a calendar, no other recordkeeping was observed at the plant. Additional recordkeeping to support data and calculations on the permittee's March 2016 Discharge Monitoring Report (DMR) was requested. An on-site exit interview was conducted on site. The inspector left the facility at approximately 1550 hours on the day of this inspection. Additional information and recordkeeping was provided by Mr. Hathaway following the CEI.

Treatment Scheme and Sludge Handling

Harper Valley HOA owns and operates a lift station and activated sludge waste water treatment plant that was built in the 1970's for 135 residences. The current population is approximately 532 according to Mr. Hathaway. A lift station is located in an open area adjacent to San Juan River. The lift station has a visual alarm (light beacon).

Raw sewage influent enters a single aeration basin at the plant. There is no screen to remove larger solids. A mechanical timer is used to switch the fixed mechanical aerator on or off. The aeration basin has a rectangular weir, where upon reaching the level of the weir, wastewater decants into a rectangular

trough basin then flows to the clarifier. When the aerator was operating, wastewater surged above the barrier between the aeration basin and trough carrying floating solids and brownish foam. The rectangular clarifier is equipped with a traveling bridge that can be operated manually to skim off foam, scum, and other floatable material into the clarifier trough. Return Activated Sludge (RAS) from the clarifier is routed back to the aeration basin or enters an aerated digester as waste activated sludge (WAS). After the clarifier, flow continues to a serpentine chlorine contact chamber. Calcium hypochlorite granules mixed in solution and stored in a drum is fed by a tube to the contact chamber for disinfection. Flow then passes through a pipe fitted with distribution tubes with sodium sulfite tablets for de-chlorination. After the de-chlorination unit, effluent enters an approximate 4-foot V-notch weir box. Flow measurements and effluent samples are taken at the weir box. A volume and timed method is used for flow measurements. The number of seconds to fill the container is recorded on the daily log. Effluent then flows through an enclosed six inch diameter pipe to an open channel then to the San Juan River located approximately 150 feet south of the plant.

Schedule of Compliance

The 2014 Permit has a schedule of compliance with a deadline for the Permittee to submit a certification confirming the NPDES discharge from Outfall 001 has ceased and request to terminate the NPDES permit. Ceasing discharge and termination of the permit is due 3 years from the permit effective date of November 1, 2014. The schedule of compliance also includes 1 and 2 year deadlines with items to be submitted to USEPA and NMED.

During this CEI, Mr. Hathaway provided a set of preliminary 65% progress submittal drawings prepared for San Juan County, New Mexico dated April 2016 for the Harper Valley Wastewater Plant Decommissioning and Lift Station Hookup Project. Harper Valley Subdivision sewage collection system is to be connected to a force main line on an easement on New Mexico State Trust Land, west of the subdivision, then connected to Valley Water and Sanitation District (VWSD) collection system. Sewage is to be treated at the City of Farmington WWTP (NPDES No. NM0020583). Mr. Hathaway indicated during this CEI that construction is still expected at the end of Summer 2016.

Note: The following sections are arranged according to the format of the enclosed EPA Inspection Checklist, rather than being ranked in order of importance.

Section B - Recordkeeping and Reporting Evaluation - Overall rating of "Unsatisfactory"

Permit Requirements

Excerpts from Part I.A (effluent limitations and monitoring) are in Attachment A of this CEI report. Part I.B (Schedule of Compliance) of the Permit states:

B. SCHEDULES OF COMPLIANCE

The permittee shall comply with the schedule as follow:

Deadline (from permit effective date)	Item(s) submitted to EPA and NMED
1 year	A plan proposing construction of the sewer line to convey the raw sewage to a nearby municipal WWTP. This plan shall include comprehensive schedules for completing design, obtaining applicable permit(s), construction, testing and discharging via the new sewer line.
2 years	A copy of the final design plan.
3 years	Permittee's certification confirming the NPDES discharge from outfall 001 has ceased and a request to terminate this NPDES permit.

If a deadline is not met, the pemittee shall, within fourteen (14) days, submit and explanation in writing why is the deadline was not met along with corrective action(s) and a schedule to accomplish.

Part I.C (Monitoring and Reporting) of the Permit states:

Monitoring results must be reported to EPA on either the electronic or paper Discharge Monitoring Report (DMR) approved formats…

1. Reporting periods shall end on the last day of the months March, June, September, and December.

2. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.

Part III.D.3 (Reporting, Retention of Records) of the Permit states:

3. RETENTION OF RECORDS
The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

Part III.D.8 (Other Noncompliance) of the Permits state *"The permittee shall report all instances of noncompliance not reported under Parts III.D.4 and D.7 …at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.7."* Part III.D.7.a (...Reporting) of the 2010 and 2015 Permits state *"…The report shall contain the following information: (1) A description of the noncompliance and its cause; (2) The period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and, (3) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge."*

Part III.D.9 (Reporting, Other Information) of the Permit states:

9. OTHER INFORMATION
Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

Part III.D.11 (Reporting, Signatory Requirements) of the Permit states:

11. SIGNATORY REQUIREMENTS
All applications, reports, or information submitted to the Director shall be signed and certified.

Findings for Recordkeeping and Reporting

- Submittal of a 1st year plan, including comprehensive schedule, to USEPA per Part I.B (Schedule of Compliance) of the Permit was not signed and certified, and was not mailed to the addresses in Standard Conditions Part III of the Permit.

  Additional Information: Certification language is in Standard Conditions, Page 7 of Part III, of the Permit. Addresses for submitting reports to EPA and copy to NMED are in Standard Conditions, Page 5 of Part III, of the Permit. The 2nd and 3rd year items required in Part I.B will also need to be signed, certified and submitted to the addresses in the Permit. It is recommended that reports and information can be submitted using mail tracking and delivery confirmation.

- Recordkeeping and reporting continue to be unsatisfactory:

  - DMRs were not submitted by the date due in the Permit. This is a **Repeat Finding**.

    Additional Notes: The March 2016 DMR that was due to be submitted by April 28 was signed/certified on May 17, 2016. NMED received a copy of the March 2016 DMR on the day of this CEI. A summary of DMR submittal information from USEPA Integrated Compliance Information System database indicates that USEPA did not receive the separate November and December 2014 DMRs required by the 2014 Permit.

  - Retention of monitoring results, instrument calibration and maintenance records for a period of at least 3 years was not documented. Permittee did not retain pH and Total Residual Chlorine (TRC) calibration records for March 2016.

    Additional Notes: Requested sampling and analysis records for pH monitoring (benchsheets) to support reporting on the March 2016 DMR were not available at the plant on the day of this CEI, were not noted on daily logs, and were not provided following this CEI. Reporting of pH monitoring results on the March 2016 DMRs could not be verified. Requested TRC and pH laboratory equipment calibration and maintenance records were not available at the plant on the day of this CEI, and were not provided following this CEI. Mr. Hathaway's e-mail dated June 6, 2016 indicated that calibration data for pH and chlorine were not retained for March 2016.

  - Recorded measurements and analytical results were not consistent with values reported on DMRs. Exceedances and excursions were not reported in the correct fields of DMRs.

    Additional Notes/Information:

    1) Provided recordkeeping did not verify that weekly average flow calculations would be consistent (i.e., the facilities week (e.g., Mon-Sun, Sun-Sat) was not documented. USEPA's guidance on weekly calculations is provided in Attachment B of this report.
    2) Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS) & E.coli concentrations (mg/L) were incorrectly reported as loading (lbs/day) on the March 2016 DMR. Similar reporting errors (i.e., loading values higher than the corresponding concentration) were made on the submitted April, May, June, August, September, October, November and December 2015 DMRs; and the January, February, April and May 2016 DMRs.
    3) E.coli bacteria Daily Max and 30 Day concentrations (cfu/100 ml) were incorrectly reported on the March 2016 DMR. The contract laboratory result for a sample collected on March 10, 2016 for E.coli bacteria monitoring was >24,196 cfu/100 ml. The March 2016 DMR indicated that only one sample was taken for the month. The March 2016 DMR incorrectly reported a Daily Max concentration of 65 cfu/100 ml, and a 30 Day Average Geometric Mean concentration of 2017 cfu/100 ml.
    4) Recordkeeping for E.coli bacteria loading calculation was not provided. An example calculation check is provided in Attachment B of this CEI Report.
    5) Number of Excursions or exceedances of permit effluent limits (column labeled "No. Ex") for BOD, TSS & E.coli were not reported on the March 2016 DMR. Similar non-reporting was observed on other DMRs submitted under the 2014 permit.
    6) Actual frequency of monitoring for TRC was not reported on the March 2016 DMR. Recorded TRC frequency was 31/31--not monthly as indicated on DMR—in March 2016.
    7) Recordkeeping for Total Dissolved Solids (TDS) net increase calculations were not provided. Calculations for TDS net increase were not verified. The March 2016 DMR indicates that only one sample was taken for the month. For a sample collected on March 10, 2016, the net increase of the TDS effluent result (662 mg/L) minus the TDS raw water result (366 mg/L) equals 296 mg/L. The TDS result of 689 mg/L on the March 2016 DMR does not appear correct.

8) BOD and TSS percent removal calculations were not reported on the January and February 2015 DMRs. The comment field on the DMRs did not explain why information was missing.
9) BOD and TSS percent removal calculation results above 100 % are incorrect. For example, the December 2015 DMR reports a value of 140 in the column for TSS percent removal.
10) Recordkeeping for pH monitoring was not provided as discussed above. Actual frequency of analysis reported to be "five per week" does not appear to be correct when DMRs report the same minimum and maximum pH value.
11) pH maximum, E.coli daily max and number of exceedances were not reported on the March 2015 DMR.
12) DMRs marked as "**Revised"** may be submitted to USEPA with copy to NMED. Missing data or other issues should be noted in the comment field of the **Revised** DMRs.

- Non-compliance reports (e.g., reported and indicated effluent exceedances) were not submitted per Part III.D.7 and 8 of the 2010 Permit.

Comments on Electronic Reporting

- USEPA encourages Permittees to transition from submitting paper DMRs to the electronic reporting NetDMR system. Permittees may obtain more information on NetDMR at https://netdmr.epa.gov/netdmr/public/home.htm.

Section C - Operations and Maintenance - Overall rating of "Unsatisfactory"

Part III.B.3 (Proper Operation and Maintenance) of the 2010 and 2015 Permits state:

a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures....

b. The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

Findings of Operations and Maintenance

- Operations and maintenance (O&M) continues to be unsatisfactory. This is a **Repeat Finding**.

  Below are O&M observations and findings for this CEI:

  - Lift station was in an unprotected or unrestricted area (e.g., area was not fenced).
  - Plant has concrete cracks, and metal fixtures show signs of rust corrosion and pitting.
  - Larger solids were not screened at the influent pipe that enters the aeration basin. Screening is important to prevent mechanical problems in the plant and effluent exceedances for TSS.
  - Process control measurements (e.g., settable solids in the aeration basin; dissolved oxygen (DO) levels in the aeration basin, sludge levels in the clarifier) were not documented and/or records not provided. For example, DO process control information is important to determine aeration cycle schedules.
  - Solids management and chlorination dosage procedures are not sufficient based on effluent permit limit exceedances for BOD, TSS and E.coli bacteria.
  - Removal of solids and cleaning of the chlorine contact chamber appears needed. Water in the chlorine contact chamber appeared cloudy. The bottom of the chamber could not be observed to ensure that there were no accumulated solids in the chamber.

- Operation and maintenance (O&M) manuals, standard operating procedures (SOPs) and routine (e.g., daily, monthly, yearly) schedules in written form for lift station, plant process control, blower and belt maintenance, laboratory equipment maintenance, repair, and other equipment life were not observed at the plant.
- Procedures for emergency treatment control (e.g., overflows, spills, power outages, equipment failures, report etc.) in written form were not observed at the plant. Written procedures for spill and overflow non-compliance reporting are important due to the proximity of the lift station and plant to the San Juan River.
- Plant operator does not have formal certification or training according to Mr. Hathaway.

  Additional Information: Information on training and certification available from the NMED Utility Operator Certification Program (UOCP) that administers Water and Wastewater Operators at all public water and wastewater utilities in New Mexico is available at https://www.env.nm.gov/swqb/UOCP/. NMED UOCP's web site also includes guidance documents and links to other resources.

Section D - Self-Monitoring - Overall rating of "Unsatisfactory" and Section F - Laboratory - Overall rating of "Unsatisfactory"

Permit Requirements for Self-Monitoring and Laboratory

Part I.A.1 of the Permit requires the effluent to be monitored for pH and TRC at a frequency of 5/week with a sample type of "Instantaneous Grab." Footnote 5 for TRC monitoring states *"Regulations at 40 CFR Part 136 define "grab" as instantaneous grab, analyzed within 15 minutes of collection."*

Part III, Section C.4 (Record Contents) of the Permit states:

Records of monitoring information shall include:
a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) and time(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

Part III.C.5 of the Permit states:

a. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.

b. The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.

c. An adequate analytical quality control program, including the analyses of sufficient standards, spikes and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

Findings for Self-Monitoring and Laboratory Procedures

Self-Monitoring and Laboratory Procedures continues to be unsatisfactory. This is a **Repeat Finding**. Below are Self-Monitoring and Laboratory Procedures observations and findings for this CEI. Excerpts from the current 40 CFR 136.3 are in Attachment C of this CEI report.

pH

- Recordkeeping for pH monitoring (benchsheets) were not provided. Procedures, calibration, instrument standardization using buffers, buffer expiration dates, approved methods, holding times and frequency of analysis were not documented to verify that pH monitoring met the conditions of the Permit.

TRC

- TRC monitoring records, in this case zero (0) reporting results on daily logs, did not include times of sampling and times of analysis to verify holding times. Instrument reagents observed on site were expired. Procedures, calibration, approved methods, were not documented to verify that pH monitoring met the conditions of the Permit.

E-coli Bacteria

- Written procedures were not provided to document proper preservation techniques, in this case, use of sodium thiosulfate ($Na_2S_2O_3$), in Table II of 40 CFR 136.3. Chain of custody forms did not document preservation.

- Contract laboratory analytical report dated April 2, 2016 for a sample collected on March 10, 2016 did not list an E.coli method with a date approved in 40 CFR 136.3. The report listed Standard Method 9223B-2001. Approved methods in 40 CFR 136.3 Table IA for E.coli (see Federal Register, Vol. 77, No. 97, Friday, May 18, 2012, Rules and Regulations) include Standard Methods 9223B-2004. SM 22nd Edition contains the 9223B-2004 approved method.

Quality Control Procedures

- Sample collection and analysis procedures in written form (e.g., sample containers, holding times, approved methods, etc.) were not observed on site and were not provided.

- Duplicate samples were not submitted to contract laboratories as a check of sampling and analytical performance. According to EPA's NPDES Inspection Manual, *"10 percent of the samples should be duplicated."*

Section G - Effluent/Receiving Waters Observations - Overall rating of "Unsatisfactory"

- Floating solids were observed in the channel before entering San Juan River. Due to the high water levels of the river, there was turbid backflow into the channel.

- **Revised** DMRs submitted to USEPA with copy to NMED need to correctly report data, effluent exceedances and excursions.

  Exceedances in March 2016 include the following based on the contract laboratory analytical report dated April 2, 2016 for samples collected on March 10, 2016:

	Limit	Result for Sample Collected 03/10/16
BOD 30 DA AVG	30 mg/L	**34 mg/L**
TSS 30 DA AVG	30 mg/L	**67 mg/L**
TSS 7 DA AVG	45 mg/L	**67 mg/L**
E.Coli Bacteria Daily Max	410 cfu/100 ml	**>24,196 MPN/100 ml***
E.coli bacteria 30 DAAVGEO	126 cfu/100 ml	**>24,196 MPN/100 ml***

**For conversion of cfu to the MPN, 1 cfu (colony forming units) = 1 MPN (most probable number)*

Based on provided recordkeeping, calculated exceedances and excursions in March 2016 include the following:

	Limit	Calculated for Sample Collected 03/10/16
E.coli bacteria loading	$4.58x10^8$ cfu/Day	
	458 Mcfu/Day	**>9,898 Mcfu/day**
TSS % Removal	≥85%	**83.6%***

**TSS Calculation = (409 mg/L influent – 67 mg/L effluent) / 409mgl Influent x 100*

NMED/SWQB Official Photograph Log Photo # 1		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1413 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Unscreened influent pipe in aeration basin.		

NMED/SWQB Official Photograph Log Photo # 2		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1416 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, WWTP, NPDES Permit #NM0029025		
Subject: Aeration basin was resting upon arrival. Mr. Hathaway briefly started the aeration cycle in the basin to show how it operated. Arrow points to brown foam collected in southeast corner of the basin at the top of the barrier. Level of wastewater and foam was observed higher than the barrier during aeration.		

NMED/SWQB Official Photograph Log Photo # 3		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1416 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Arrow points to brown foam in the southwest corner of the basin during aeration. Except for the foam, level of wastewater and foam did not rise above the barrier.		

NMED/SWQB Official Photograph Log Photo # 4		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1420 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Photo was taken when the aeration was off. Brown foam and solids exist in both channels of the basin. Arrow points to opening in the barriers where flow from the aeration basin enters the inner channel.		

NMED/SWQB Official Photograph Log Photo # 5		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1421 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Traveling bridge skimmer in clarifier		

NMED/SWQB Official Photograph Log Photo # 6		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1420 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Floating solids, metal corrosion, and vegetation growing in clarifier.		

NMED/SWQB Official Photograph Log Photo # 7		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1422 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Metal corrosion of troughs and weir teeth, and algal growth in Clarifier. Vegetation, leaf litter and dead bird was in clarifier trough.		

NMED/SWQB Official Photograph Log Photo # 8		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1423 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Sludge digester. Algal growth on surface of WAS.		

NMED/SWQB Official Photograph Log Photo # 9		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1427 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Storage shed at plant with chlorination drum and feed hose.		

NMED/SWQB Official Photograph Log Photo # 10		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1428 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Chlorination feed and flow into chlorination chamber. Flow was slightly turbid. Bottom of chamber could not be observed.		

NMED/SWQB Official Photograph Log Photo # 11		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1429 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Flow in pipe before de-chlorination shown in next photo.		

NMED/SWQB Official Photograph Log Photo # 12		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1430 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: De-chlorination tablet risers		

NMED/SWQB Official Photograph Log Photo # 13		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1432 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Effluent at weir box		

NMED/SWQB Official Photograph Log Photo # 14		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1434 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Effluent channel downstream of effluent pipe.		

NMED/SWQB Official Photograph Log Photo # 15		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1434 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Floating solids and foam observed at location shown in previous photo.		

NMED/SWQB Official Photograph Log Photo # 16		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1436 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Channel that leads to San Juan River.		

NMED/SWQB Official Photograph Log Photo # 17		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1436 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Looking from right bank at San Juan River		

NMED/SWQB Official Photograph Log Photo # 18		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1436 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: Looking downstream from right bank at San Juan River		

NMED/SWQB Official Photograph Log Photo # 19		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1448 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: On-site Chlorine Meter in case. Battery was corroded.		

NMED/SWQB Official Photograph Log Photo # 20		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1451 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NM0029025		
Subject: On-site reagents for LaMotte Chlorine DPD were expired (printing on package reads “Exp 11/06”).		

NMED/SWQB Official Photograph Log Photo # 21		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1452 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NMED0029025		
Subject: On-site pH tester		

NMED/SWQB Official Photograph Log Photo # 22		
Photographer: Erin S. Trujillo	Date: 05/19/2016	Time: 1452 hours
City/County: Harper Valley Home Owners Association / San Juan County		State: New Mexico
Location: Harper Valley Home Owners Association, NPDES Permit #NMED0029025		
Subject: Two pH buffers (labeled 10 and 4) were observed. There were no dates as to when the buffers were mixed and/or would expire.		

Attachment A – Additional Excerpts from 2014 Permit

Excerpts from Part I.A.1 Final Effluent Limits of the Permit state:

PART I – REQUIREMENTS FOR NPDES PERMITS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. OUTFALL 001 - FINAL Effluent Limits – 0.096 MGD Design Flow

During the period beginning the effective date of the permit and lasting through the date three (3) years from the effective date of this permit, the permittee is authorized to discharge treated domestic wastewater from Outfall 001 to San Juan River in Segment 20.6.4.401 of the San Juan River Basin. Such discharges shall be limited and monitored by the permittee and reported as specified below. The discharge from Outfall 001 is prohibited after three years from the effective date.

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
POLLUTANT	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	6.6 s.u.	9.0 s.u.	5/week	Instantaneous Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS	
	lbs/day, unless noted		mg/l, unless noted (*1)				
POLLUTANT	30-DAY AVG	7-DAY AVG	30-DAY AVG	7-DAY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	Report MGD	Report MGD	***	***	***	Daily	Instantaneous
BOD_5	24	36	30	45	N/A	1/Month	Grab
TSS	24	36	30	45	N/A	1/Month	Grab
BOD_5 % removal, minimum	≥85 (*2)	***	***	***	***	1/Month	Calculation
TSS % removal, minimum	≥85 (*2)	***	***	***	***	1/Month	Calculation
TDS, Net increase (*3)	N/A	N/A	N/A	N/A	400	1/Quarter	Grab
TRC	N/A	N/A	N/A	N/A	11 ug/l (*4)	5/week	Instantaneous Grab (*5)
E. coli bacteria	4.58×10^8 cfu/day	N/A	126 cfu/100 ml	N/A	410 cfu/100 ml	1/Month	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY TESTING 48-HR ACUTE NOEC FRESHWATER (*5)	30-DAY AVG	48-HR MINIMUM	MEASUREMENT FREQUENCY (*7)	SAMPLE TYPE
Daphnia pulex	Report	Report	Once/5 year	Grab
Pimephales promelas	Report	Report	Once/5 year	Grab

Attachment B – Example Calculation Check and 7-Day Average Guidance

E.coli Bacteria

Using Permittee's data recorded for March 2016, the following equations were used to convert E.coli bacteria concentration (>24196 cfu/100 mL sample collected on March 10, 2016) using the corresponding daily effluent flow in MGD (0.0108 Mgals/day):

Flow on Day of Sample Collection Conversion =									
1	gal		1	million gal		60 sec/min x 60 min /hr x 24 hr/day	=	0.0108	MGD
8.0	sec	x	1,000,000	gal	x				

E.Coli Bacteria Loading														
24196	cfu	x	1 Mcfu	x	1000 ml	x	1 L	x	1,000,000 gals	x	0.0108 Mgals	=	9,898	Mcfu/day
100	ml		1,000,000 cfu		1 L		0.264 gals		1 Mgals		day			

Loading = >9,898 Mcfu/day

7-Day Average Guidance

USEPA Region 6 (6EN-WC) NPDES Reporting Requirements Handbook revised August 25, 2004 states:

> 3. **How do I calculate and report 7-day averages?**
>
> We recognize that calendar weeks and calendar months rarely coincide. Therefore, for the purpose of calculating and reporting 7-day averages, you should follow the process below:
>
> a. Define your week (SUN-SAT, MON-SUN, etc.).
>
> b. Calculate the averages of all sample data obtained for each week.
>
> c. The highest calculated weekly average will be reported on the DMR for the month in which (1) the week ends or (2) the week begins, or (3) the month which contains the greatest number of days. It is the choice of the facility. However, the choice should be consistent month to month, year to year. SET A RULE AND STICK WITH IT.

Attachment C

40 CFR 136.3 Selected Excerpts (*Oval Shape added to Highlight Parameter*)

Approved test procedures for TRC and pH (excerpts from Table IB):

TABLE IB—LIST OF APPROVED INORGANIC TEST PROCEDURES—Continued

Parameter	Methodology[58]	EPA[52]	Standard methods	ASTM	USGS/AOAC/Other
17. Chlorine–Total residual, mg/L	Amperometric direct		4500–Cl D–2000	D1253–08.	
	Amperometric direct (low level)		4500–Cl E–2000.		
	Iodometric direct		4500–Cl B–2000.		
	Back titration ether end-point[15]		4500–Cl C–2000.		
	DPD–FAS		4500–Cl F–2000.		
	Spectrophotometric, DPD		4500–Cl G–2000.		
	Electrode				See footnote.[16]
28. Hydrogen ion (pH), pH units	Electrometric measurement		4500–H^+ B–2000	D1293–99 (A or B)	973.41,[3] I–1586–85.[2]
	Automated electrode	150.2 (Dec. 1982)[1]			See footnote,[21] I–2587–85.[2]

Required Containers, Preservation Techniques, and Holding Times (Excerpts from Table II):

TABLE II—REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES

Parameter number/name	Container[1]	Preservation[2 3]	Maximum holding time[4]
Table IA—Bacterial Tests:			
1–5. Coliform, total, fecal, and *E. coli*	PA, G	Cool, <10 °C, 0.0008% $Na_2S_2O_3$[5].	8 hours.[22 23]
6. Fecal streptococci	PA, G	Cool, <10 °C, 0.0008% $Na_2S_2O_3$[5].	8 hours.[22]
7. Enterococci	PA, G	Cool, <10 °C, 0.0008% $Na_2S_2O_3$[5].	8 hours.[22]
8. *Salmonella*	PA, G	Cool, <10 °C, 0.0008% $Na_2S_2O_3$[5].	8 hours.[22]
Table IA—Aquatic Toxicity Tests:			
9–12. Toxicity, acute and chronic	P, FP, G	Cool, ≤6 °C[16]	36 hours.
Table IB—Inorganic Tests:			
1. Acidity	P, FP, G	Cool, ≤6 °C[18]	14 days.
2. Alkalinity	P, FP, G	Cool, ≤6 °C[18]	14 days.
4. Ammonia	P, FP, G	Cool, ≤6 °C[18], H_2SO_4 to pH <2.	28 days.
9. Biochemical oxygen demand	P, FP, G	Cool, ≤6 °C[18]	48 hours.
10. Boron	P, FP, or Quartz	HNO_3 to pH <2	6 months.
11. Bromide	P, FP, G	None required	28 days.
14. Biochemical oxygen demand, carbonaceous.	P, FP G	Cool, ≤6 °C[18]	48 hours.
15. Chemical oxygen demand	P, FP, G	Cool, ≤6 °C[18], H_2SO_4 to pH <2.	28 days.
16. Chloride	P, FP, G	None required	28 days.
17. Chlorine, total residual	P, G	None required	Analyze within 15 minutes.
21. Color	P, FP, G	Cool, ≤6 °C[18]	48 hours.
23–24. Cyanide, total or available (or CATC) and free.	P, FP, G	Cool, ≤6 °C[18], NaOH to pH >10[5 6], reducing agent if oxidizer present.	14 days.

TABLE II—REQUIRED CONTAINERS, PRESERVATION TECHNIQUES, AND HOLDING TIMES—Continued

Parameter number/name	Container[1]	Preservation[2 3]	Maximum holding time[4]
25. Fluoride	P	None required	28 days.
27. Hardness	P, FP, G	HNO_3 or H_2SO_4 to pH <2.	6 months.
28. Hydrogen ion (pH)	P, FP, G	None required	Analyze within 15 minutes.