



Region 6 Compliance Assurance and Enforcement Division
INSPECTION REPORT

Inspection Date(s):	08/05-07/2014		
Media:	Water (CWA)		
Regulatory Program(s)	NPDES		
Company Name:	Village of Chama		
Facility Name:	Chama Wastewater Treatment Plant		
Facility Physical Location:	0.5 miles west of US 84/64 and NM 17		
(city, state, zip code)	Village of Chama, New Mexico 87520		
Mailing address:	P.O. Box 794		
(city, state, zip code)	Village of Chama, New Mexico 87520		
County/Parish:	Rio Arriba County		
Facility Contact:	Jennifer Gallegos	Mayor	575-756-2184
	jgallegos7226@yahoo.com		
FRS Number:	110009831174		
Identification/Permit Number:			
Media Number:	NM0027731		
NAICS:			
SIC:	4952 – Sewerage Systems		
Facility Representatives:	Levi Sandoval	WW Plant Operator	575-756-2184
	Ray Toras	Electrician	575-756-2184
	Clayton Ten Eyck	Engineer - MolzenCorbin	505-242-5700
	Scout Mendenhall	EIT - MolzenCorbin	505-242-5700
EPA Inspectors:	Kenneth L. AuBuchon	USEPA/6EN-WMH	281-983-2151
State Inspector(s):			
Other Inspector(s):			
Metadata	Title:	Village of Chama Chama WWTP Chama Rio Arriba County New Mexico	
	Author:	US EPA Region 6 Compliance Assurance and Enforcement Division Dallas TX	
	Subject:	Inspection Report Clean Water Act CWA National Pollutant Discharge Elimination System NPDES	
	Keywords:	Publicly Owned Treatment Works POTW Municipal	
EPA Lead Inspector			Date 9/19/2014
Signature/Date	Kenneth L. AuBuchon		
Supervisor			Date 9/24/14
Signature/Date	Carol Peters		

Section I - INTRODUCTION**PURPOSE OF THE INSPECTION**

On August 05, 2014, I, Kenneth L. AuBuchon arrived at the Village of Chama at approximately 9:05 am to conduct an announced Compliance Evaluation Inspection (CEI). I met with Mr. Levi Sandoval/WWTP Operator at the Village of Chama City Hall. I presented my credentials to Mr. Sandoval and informed him that this was an EPA inspection to determine compliance with the facility's NPDES Permit and the Clean Water Act. The inspection was conducted under the authority of the National Pollutant Discharge Elimination System (NPDES) permit program, in accordance with the Federal Clean Water Act.

Before exiting the facility, an exit briefing was conducted to explain areas of concerns noted during the inspection that would be detailed in this report. This inspection report is based on information supplied by the Village of Chama representatives (the permittee), observations made by the U.S. EPA inspector, and records and reports maintained by the permittee, State of New Mexico, and U.S. EPA.

FACILITY DESCRIPTION

The Village of Chama has four (4) lift stations that lift influent to a grinder pump. The grinder pump pushes the influent through a ¾ inch bar screen. The influent then enters a splitter box where it flows into the first of two aerated, concrete-lined lagoons (See areas of concerns regarding aeration of lagoons). Flow then enters a serpentine chlorine contact chamber followed by de-chlorination with sulfur dioxide. The effluent exits through a 60 degree v-notch weir into an encased 10 inch pipe to the Rio Chamita.

Section II - OBSERVATIONS

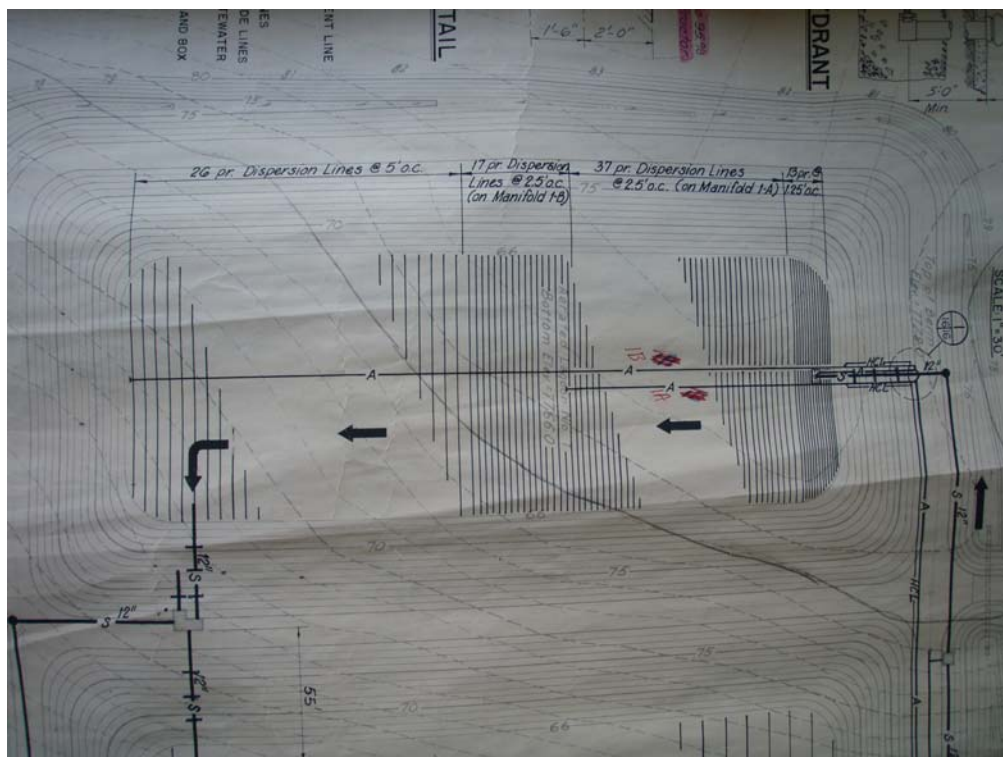
The areas evaluated during the inspection will be rated in Section C of Appendix 1 (EPA Form 3560-3 (Rev. 9-94)) and the observations made during the inspection will be detailed in Section III (Areas of Concern).

Section III – AREAS OF CONCERN

Requirement - Under Part III, Standard Conditions for NPDES Permits, Section B. Proper Operation and Maintenance, Item 3.a – *The permittee shall at all times properly operate and maintain all facilities and systems of treatment control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.*

Concern: The facility's treatment units are not properly controlled and operated to achieve compliance with the conditions of permit NM0027731. Certified DMRs filed by the facility show discharges of pollutants (Total Suspended Solids (TSS), Ammonia, Total Aluminum, Dissolved Oxygen (DO), Biochemical Oxygen Demand (BOD) and E. coli) that exceed the permitted effluent limitations established in Part I.A of permit NM0027731 (See Appendix 2). The Village of Chama is currently under an Administrative Complaint (Docket No. CWA-06-2013-1863).

The primary aeration lagoon was not being properly operated as designed or maintained. The original plant designs (August 1984) show heavy aeration laterals in the primary lagoon.



At the time of the inspection, the header that supplies air to the primary laterals was busted. Mr. Sandoval said that the header had been broken since 1992.



The Village has been granted \$8.2 million through capital outlay by the State of New Mexico and has started a three (3) year engineering and construction process to construct a new WWTP. Interim operation and maintenance improvements are needed to improve WWTP performance to bring interim discharges into compliance. Representatives from Molzen Corbin, engineering firm for the Village of Chama, performed a site evaluation on October 22, 2013 at the Village of Chama WWTP to determine adjustments that could be made to enhance wastewater treatment see Appendix 3.

Section IV – FOLLOW UP

I received the following additional information:

August 13, 2014 - facility sample results on a CD (not contained in this report)

August 18, 2014 – Chama WWTP – Memorandum on Lagoons and Short Term Improvements via e-mail from Molzen Corbin (Appendix 3).

Section V – LIST OF APPENDICES

Appendix 1 – EPA Form 3560-3(Rev. 9-94)

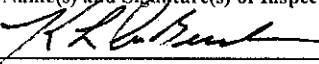
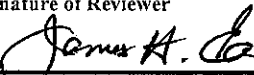
Appendix 2 – E90 Effluent Violations

Appendix 3 – Molzen Corbin Chama Lagoon WWTP Evaluation (Short Term Improvements)

Appendix 4 – Village of Chama WWTP Pre-Design

Appendix 5 – Village of Chama Proposed Implementation Schedule for WWTP and AO History

Appendix 1
EPA Form 3560-3 (Rev. 9-94)

		UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Washington, D.C. 20460		Form Approved OMB No. 2040-0003 Approval Expires 7-31-85			
NPDES Compliance Inspection Report							
Section A: National Data System Coding							
Transaction Code		NPDES		yr/mo/day			
1	N	2	5	3	N		
4	M	5	0	6	0		
7	2	8	7	9	7		
10	3	11	1	12	1		
13	4	14	0	15	8		
16	0	17	0	18	5		
19	C	20	R	21	1		
Remarks							
Inspection Work Days		Facility Evaluation Rating		BI QA Reserved			
67		69		70	1		
71		72		73			
74		75		76			
77		78		79			
80		81		82			
Section B: Facility Data							
Name and Location of Facility Inspected (For industrial users discharging to POTW, also include POTW name and NPDES permit number) Village of Chama WWTP 05 miles west of US 84/64 and NM17 Chama, New Mexico 87520 Rio Arriba County			Entry Time /Date		Permit Effective Date		
			~ 9:05 am / 08-05-2014		November 01, 2011		
			Exit Time/Date		Permit Expiration Date		
			~ 4:00 pm / 08-07-2014		October 31, 2016		
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s) Levi Sandoval / WW Plant Operator / 575-756-2184 Ray Toras / Village Electrician / 575-756-2184 Clayton Ten Eyck / Engineer - MolzenCorbin / 505-242-5700				Other Facility Data SIC Code: 4952 -Sanitary Wastewater Treatment Facility			
Name, Address of Responsible Official/Title/Phone and Fax Number Jennifer Gallegos / Mayor / 575-756-2184 P.O. Box 794 Chama, New Mexico 87520			Contacted Yes ☒ No ☐		Receiving Stream: Rio Chamita -> Rio Chama -> Rio Grande Basin (Subsegment 20.6.4.119)		
Section C: Areas Evaluated During Inspection (S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)							
S	Permit	N	Flow Measurement	U	Operations & Maintenance	N	CSO/SSO
S	Records/Reports	S	Self-Monitoring Program	N	Sludge Handling/Disposal	N	Pollution Prevention Plan
U	Facility Site Review	N	Compliance Schedules	N	Pretreatment	N	Multimedia
N	Effluent/Receiving Waters	N	Laboratory	N	Storm Water	N	Other:
Section D: Summary of Findings/Comments (Attach additional sheets if necessary)							
Name(s) and Signature(s) of Inspector(s)  Kenneth L. AuBuchon			Agency/Office/Telephone/Fax USEPA/ 6EN-WMH / (281) 983-2151 / fax (281) 983-2248			Date September 19, 2014	
Signature of Reviewer  James H. Eng			Agency/Office/Phone and Fax Numbers USEPA/ 6EN-WMH / (281) 983-2148 / fax (281) 983-2248			Date September 19, 2014	

Appendix 2

E90 Effluent Violations

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Permit Name	Version Nbr	Curr. Major Minor Status	Issue Date	Effective Date	Expiration Date	Engineer	Specialist
VILLAGE OF CHAMA, WWTP	0	Minor	9/21/11	11/1/11	10/31/16	TONY	GLADYS
VILLAGE OF CHAMA, WWTP	2	Minor	12/19/01	1/1/02	6/30/05	TONY	SONIAC
VILLAGE OF CHAMA, WWTP	3	Minor	6/11/07	7/1/07	9/30/10	TONY	SONIA

Version # 0

Outfall 001A

00310 BOD, 5-day, 20 deg. C / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
11/1/11	10/31/16	GRAB	Twice Per Month

Limit		
Limit Unit Desc	Milligrams per Liter	Milligrams per Liter
Statistical Base	30DA AVG	7 DA AVG
Limit Value	30	45
DMR Values		
2/29/12	44.6	53.2
3/31/12	33.9	
4/30/12	43.85	59.7
5/31/12	43.45	53.1
9/30/12	45	65
12/31/12	36	
7/31/13	49	53
8/31/13	55	65
1/31/14	33	
2/28/14	45	47
3/31/14	73.5	93

00610 Nitrogen, ammonia total [as N] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
11/1/11	10/31/16	GRAB	Twice Per Month

Limit		
Limit Unit Desc	Milligrams per Liter	Milligrams per Liter
Statistical Base	30DA AVG	DAILY MX
Limit Value	10.8	16.2
DMR Values		
3/31/12	12.55	
4/30/12	16.7	17.4
5/31/12	14.4	18.5
6/30/12	12.65	
3/31/13	15.55	19.2
3/31/14	31.5	37
4/30/14	14.5	18

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Version # 0

Outfall 001A

00610 Nitrogen, ammonia total [as N] / Location 1 / Season 1 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
11/1/11	10/31/16	GRAB	Twice Per Month

Limit				
Limit Unit Desc	Pounds per Day	Pounds per Day	Milligrams per Liter	Milligrams per Liter
Statistical Base	30DA AVG	DAILY MX	30DA AVG	DAILY MX
Limit Value	12.7	19.05	5.1	7.65
DMR Values				
11/30/11			14.2	18.1
1/31/12			15.1	18.4
2/29/12			13.55	14.9
7/31/12	38.6	51.5	24.3	32.5
8/31/12			18.85	32.5
9/30/12			16.85	19.8
10/31/12			13	19.8
11/30/12			14.26	17.13
12/31/12			15.3	14.2
1/31/13	15.6		19.75	20.6
2/28/13	12.8		18.28	20.1
7/31/13	20.2	25	15.55	19.2
8/31/13	13.4	22.8	12.35	21
9/30/13			6.2	11
10/31/13		19.3	17.65	29
11/30/13	18	21	24	28
12/31/13			13.5	15
1/31/14			17	19
2/28/14	16.1		20.5	21

01105 Aluminum, total [as Al] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
11/1/11	10/31/16	GRAB	Twice Per Month

Limit				
Limit Unit Desc	Pounds per Day	Pounds per Day	Micrograms per Lite	Micrograms per Lite
Statistical Base	30DA AVG	DAILY MX	30DA AVG	DAILY MX
Limit Value	.22	.15	58	87
DMR Values				
4/30/12	700	800	795	980
7/31/12	.6	1.2	600	1200
9/30/12		1.01	60	120
1/31/13	71.3		90	180
2/28/13	255.7		365	
3/31/13	347.9		515	540
9/30/13	.3		335	670
10/31/13			250	
11/30/13				100
12/31/13				100
2/28/14		.21	105	210
3/31/14		.3	275	430
4/30/14			95	190

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Version # 0

Outfall 001A

51040 E. coli / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
11/1/11	10/31/16	GRAB	Twice Per Month

Limit			
Limit Unit Desc	Billion Colony Formi	Colony Forming Uni	Colony Forming Uni
Statistical Base	DAILY MX	30DAVGEO	DAILY MX
Limit Value	1.43	126	235
DMR Values			
4/30/12	2.89		
6/30/12	49.18		2419.6
1/31/13	1.69	1231.95	
2/28/13	1.69	1209.8	
3/31/13	1.69	1209.8	
1/31/14	1.5	505.6	1011.2
2/28/14	1358.5	871.8	1732.9

Outfall TX1Q

22414 Whole effluent toxicity / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
11/1/11	10/31/16	COMP24	Quarterly

Limit		
Limit Unit Desc	Percent	Percent
Statistical Base	7 DA MIN	MO AV MN
Limit Value	10	10
DMR Values		
1/31/12	0	0
4/30/12	0	0
4/30/13	0	0
1/31/14	0	0

Version # 2

Outfall 001A

00310 BOD, 5-day, 20 deg. C / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
1/1/02	12/31/04	GRAB	Twice Per Month
1/1/05	6/30/05	GRAB	Twice Per Month

Limit			
Limit Unit Desc	Pounds per Day	Milligrams per Liter	Milligrams per Liter
Statistical Base	30DA AVG	30DA AVG	7 DA AVG
Limit Value	75.06	30	45

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Version # 2

Outfall 001A

00310 BOD, 5-day, 20 deg. C / Location 1 / Season 0 / Base

DMR Values			
11/30/02		36.8	
2/28/03		41.37	51.4
3/31/03	86.8	52.08	57.5
8/31/03		36.45	50
10/31/03		31.5	
11/30/03		42.33	
12/31/03		44.5	47
1/31/04		95	116
2/29/04		104	109
3/31/04		88	106
4/30/04		37.5	
5/31/04		47.5	49
6/30/04		55.5	60
7/31/04		53	56
8/31/04		53.5	59
9/30/04		50.5	59
7/31/05		38.5	
8/31/05		35.3	
9/30/05		33.9	
4/30/06		37.36	
5/31/06		40.95	
6/30/06		48.05	53.3
7/31/06	111.2	63.5	64.8
8/31/06		39.7	48.5
9/30/06		31.8	

00610 Nitrogen, ammonia total [as N] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
1/1/05	6/30/05	GRAB	Twice Per Month

Limit			
Limit Unit Desc	Pounds per Day	Milligrams per Liter	Milligrams per Liter
Statistical Base	30DA AVG	30DA AVG	7 DA AVG
Limit Value	18	7.2	10.8
DMR Values			
3/31/05	23.22	8.98	12.1
4/30/06		17.41	21
5/31/06			12.3
6/30/06	23.3	15.2	15.8
3/31/07	20.14	16.1	16.5
5/31/07		7.57	
6/30/07		10.8	11.1

00610 Nitrogen, ammonia total [as N] / Location 1 / Season 1 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
1/1/05	6/30/05	GRAB	Twice Per Month

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Version # 2

Outfall 001A

00610 Nitrogen, ammonia total [as N] / Location 1 / Season 1 / Base

Limit				
Limit Unit Desc	Pounds per Day	Pounds per Day	Milligrams per Liter	Milligrams per Liter
Statistical Base	30DA AVG	7 DA AVG	30DA AVG	7 DA AVG
Limit Value	8.46	12.7	3.4	5.1
DMR Values				
1/31/05	12	16	16	17
2/28/05	17.91	17.91	15.45	15.8
7/31/05		16.68	5.87	11.7
8/31/05	18.09	18.35	10.85	11
9/30/05	15.35	18.51	9.2	11.1
10/31/05	11.48		8.1	8.82
11/30/05			4.11	
12/31/05			11.15	11.8
7/31/06	26.27	28.89	15	16.5
8/31/06	16.98	22.76	13.05	17.5
9/30/06	16.64	17.87	17.5	18.9
10/31/06	12.6	13.4	12.6	13.4
11/30/06	14.8	16	17.75	19.2
12/31/06	11.97		15.95	16.2
1/31/07	19.56	19.56	19.55	20.4
2/28/07		15.7	15.7	18.1

50060 Chlorine, total residual / Location A / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
1/1/02	12/31/04	GRAB	Daily

Limit	
Limit Unit Desc	Milligrams per Liter
Statistical Base	INST MAX
Limit Value	.099
DMR Values	
11/30/02	7.05

74055 Coliform, fecal general / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
1/1/02	12/31/04	GRAB	Twice Per Month
1/1/05	6/30/05	GRAB	Twice Per Month

Limit		
Limit Unit Desc	Number per 100 Mill	Number per 100 Mill
Statistical Base	30DAVGEO	DAILY MX
Limit Value	100	200
DMR Values		
5/31/02		2480
12/31/02	18510	3702
6/30/03		3300
8/31/03	117.63	
9/30/03		230
10/31/03		5300
11/30/03		18000

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Version # 2

Outfall 001A

74055 Coliform, fecal general / Location 1 / Season 0 / Base

DMR Values		
6/30/04	302	18400
8/31/04	178	355
1/31/05		3100
3/31/05	1032.35	4400
4/30/05	150.8	455
5/31/05		890
6/30/05	169.7	1600
8/31/05	126	1600
4/30/06	330	
5/31/06	182	1100
6/30/06	221.3	1100
7/31/06	2754	19000
5/31/07		710

Outfall TX1Y

22414 Whole effluent toxicity / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
1/1/05	6/30/05	COMP24	Annual

Limit		
Limit Unit Desc	Percent	Percent
Statistical Base	7 DA MIN	MO AV MN
Limit Value	10	10
DMR Values		
12/31/05	0	0

Version # 3

Outfall 001A

00310 BOD, 5-day, 20 deg. C / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
7/1/07	9/30/10	GRAB	Twice Per Month

Limit				
Limit Unit Desc	Pounds per Day	Pounds per Day	Milligrams per Liter	Milligrams per Liter
Statistical Base	30DA AVG	7 DA AVG	30DA AVG	7 DA AVG
Limit Value	75	113	30	45
DMR Values				
7/31/07	101.84			
8/31/07	91.24		52.1	52.4
3/31/08	8827.5	980.8		
6/30/09		115.7		74.6
7/31/09			37.6	51.8

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Version # 3

Outfall 001A

00310 BOD, 5-day, 20 deg. C / Location 1 / Season 0 / Base

DMR Values				
8/31/09			34.4	
9/30/09			49	56.2
10/31/09			36.7	
11/30/09				51.8
12/31/09			38.8	56.2
2/28/10			30.7	
3/31/10			44.25	47.7
4/30/10				47.7
8/31/10			33	
12/31/10			33.85	48
1/31/11			30.6	
2/28/11			35.95	71.9
3/31/11	115.9	150.1	115.8	150
4/30/11	78.2		78.8	106
6/30/11	121.6	127.1	121.5	127
7/31/11	85.9	137.9	66	106
8/31/11			41.85	
9/30/11			32.5	

00400 pH / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
7/1/07	9/30/10	GRAB	Twice Per Month

Limit	
Limit Unit Desc	Standard Units
Statistical Base	MINIMUM
Limit Value	6.6
DMR Values	
7/31/09	6.5
8/31/09	6.2

00530 Solids, total suspended / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
7/1/07	9/30/10	GRAB	Twice Per Month

Limit		
Limit Unit Desc	Pounds per Day	Pounds per Day
Statistical Base	30DA AVG	7 DA AVG
Limit Value	225	338
DMR Values		
3/31/08	950.1	1042.1

00610 Nitrogen, ammonia total [as N] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
7/1/07	9/30/10	GRAB	Twice Per Month

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Version # 3

Outfall 001A

00610 Nitrogen, ammonia total [as N] / Location 1 / Season 0 / Base

Limit				
Limit Unit Desc	Pounds per Day	Pounds per Day	Milligrams per Liter	Milligrams per Liter
Statistical Base	30DA AVG	DAILY MX	30DA AVG	DAILY MX
Limit Value	27	40.5	10.8	16.2
DMR Values				
3/31/08	796.9	858.2	13	
3/31/09	43.4	43.8	32.5	32.8
6/30/09			11.15	
3/31/10			13	18.8
4/30/10			12.6	19.9
3/31/11			14	16.5
4/30/11			12.25	

00610 Nitrogen, ammonia total [as N] / Location 1 / Season 1 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
7/1/07	9/30/10	GRAB	Twice Per Month

Limit				
Limit Unit Desc	Pounds per Day	Pounds per Day	Milligrams per Liter	Milligrams per Liter
Statistical Base	30DA AVG	DAILY MX	30DA AVG	DAILY MX
Limit Value	12.7	19.05	5.1	7.65
DMR Values				
7/31/07	17.86		10.3	10.4
8/31/07	23	23.8	13.15	13.6
9/30/07	16.21		16.2	17.4
10/31/07	21.07	22.06	18.05	18.9
11/30/07	18.2		18.2	18.4
12/31/07	23.72	26.57	15.8	17.7
1/31/08	18.2		14.55	14.8
2/29/08	20.6	22.7	14.5	16
8/31/08	15.4		11	
9/30/08	17.2		10	10
10/31/08	13.3		11.44	15
11/30/08			11.4	10.7
12/31/08			10.85	10
1/31/09	25.9	27.9	16.35	17.6
2/28/09	19.1	19.5	12.7	13
7/31/09	15		8.59	8.71
8/31/09	14.3		8.6	11.1
9/30/09	16.6		11.7	12.1
10/31/09			10.18	11.1
11/30/09			10.24	8.71
12/31/09			15.05	12.1
1/31/10	23.7	23.9	15.3	15.5
2/28/10	13.4		13.3	14
7/31/10	14.2		10	11
8/31/10			9.75	11
9/30/10			16.1	17
10/31/10			8.35	10.5
11/30/10			8.3	9.1
12/31/10			15.5	17.5

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Version # 3

Outfall 001A

00610 Nitrogen, ammonia total [as N] / Location 1 / Season 1 / Base

DMR Values				
1/31/11	14.7		18	22.5
2/28/11	14.2		18.5	22
7/31/11	24.7	32.1	19	24.7
8/31/11	19.1	22.4	17.1	20
9/30/11	18.1	23.1	21.25	27.2
10/31/11	13.6		18.1	18.4

01105 Aluminum, total [as Al] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
7/1/07	9/30/10	GRAB	Twice Per Month

Limit				
Limit Unit Desc	Pounds per Day	Pounds per Day	Micrograms per Lite	Micrograms per Lite
Statistical Base	30DA AVG	DAILY MX	30DA AVG	DAILY MX
Limit Value	.22	.15	58	87
DMR Values				
7/31/10			73	95
11/30/10		.213	245	330
1/31/11			165	190
3/31/11	120.1		120	240
5/31/11	30.63	64.1	325	650
6/30/11	34	68	340	680
7/31/11		.26	150	200
8/31/11	67.1	134	60	120
9/30/11			65	130

51040 E. coli / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
7/1/07	9/30/10	GRAB	Twice Per Month

Limit		
Limit Unit Desc	Colony Forming Uni	Colony Forming Uni
Statistical Base	30DAVGEO	DAILY MX
Limit Value	126	235
DMR Values		
4/30/08	385.5	770
5/31/08	777.05	1553.1
6/30/08	362.4	698.5
7/31/08	179.04	
1/31/09	400	1050
8/31/09	3000	3000
2/28/10	450	
6/30/10	1323.5	1733

74055 Coliform, fecal general / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
7/1/07	9/30/10	GRAB	Monthly

Effluent Violations (E90s) From 01/01/2000 To Present

Permit NM0027731

Version # 3

Outfall 001A

74055 Coliform, fecal general / Location 1 / Season 0 / Base

Limit		
Limit Unit Desc	Colony Forming Uni	Colony Forming Uni
Statistical Base	30DAVGEO	DAILY MX
Limit Value	100	200
DMR Values		
7/31/07	33884.4	52000
5/31/08		1500
6/30/08	160	
1/31/09	162	
4/30/09	263	263
8/31/09	245	245
10/31/10	200	
12/31/10	200	

Outfall TX1S

22414 Whole effluent toxicity / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
7/1/07	9/30/10	COMP24	Once Every 6 Months

Limit		
Limit Unit Desc	Percent	Percent
Statistical Base	7 DA MIN	MO AV MN
Limit Value	10	10
DMR Values		
12/31/08	0	0
6/30/10	0	0
12/31/10	0	0

**Environmental Protection Agency
Integrated Compliance Information System
Quarterly Non-compliance Report **QNCR****

Data Run Date: 07/27/2014
Refresh Date: 07/28/2014

Page 32 of 108
From: 04/01/2014 To: 06/30/2014

New Mexico / Region 06

Location	Grant							
Instance of Noncompliance	RNC	Violation Date	Enforcement Action	Enforcement Date	Status	Status Date	Comments	
POTW								
Facility: VILLAGE OF CHAMA - NPDES ID: NM0027731 - FRS ID: 110009831174								
CHAMA	\$	Noncompliant						
			Administrative Compliance Orders (EPA) 06-2013-1762 - 1	03/25/13				
Nitrogen, ammonia total [as N]	001	10/31/2009 - 12/31/12			RP		Resolved Pending	
			Agency Enforcement Review (EPA)	05/16/14				
Compliance Schedule	4P	RPT	10/01/2013		NC	11/01/2013	Continuing Noncompliance	
Compliance Schedule	4P	RPT	07/01/2013		NC	08/01/2013	Continuing Noncompliance	
DMR Overdue to EPA/State	001		06/30/2013		NC		Continuing Noncompliance	
DMR Overdue to EPA/State	001		05/31/2013		NC		Continuing Noncompliance	
DMR Overdue to EPA/State	001		04/30/2013		NC		Continuing Noncompliance	
Compliance Schedule	4P	RPT	04/01/2013		NC	05/02/2013	Continuing Noncompliance	
Compliance Schedule	4P	RPT	01/01/2013		NC	02/01/2013	Continuing Noncompliance	
Compliance Schedule	4P	RPT	10/01/2012		NC	11/01/2012	Continuing Noncompliance	
Aluminum, total [as Al]	001		09/30/2012 - 10/31/13		NC		Continuing Noncompliance	
BOD, 5-day, 20 deg. C	001		08/31/2012 - 8/31/12		NC		Continuing Noncompliance	
Nitrogen, ammonia total [as N]	001		08/31/2012 - 12/31/13		NC		Continuing Noncompliance	
Nitrogen, total [as N]	001		08/31/2012 - 8/31/12		NC		Continuing Noncompliance	
Phosphorus, total [as P]	001		08/31/2012 - 8/31/12		NC		Continuing Noncompliance	
Solids, total suspended	001		08/31/2012 - 8/31/12		NC		Continuing Noncompliance	
Compliance Schedule	4P	RPT	07/01/2012		NC	08/01/2012	Continuing Noncompliance	
Compliance Schedule	3P	RPT	04/30/2012		NC	05/31/2012	Continuing Noncompliance	
Compliance Schedule	4P	RPT	04/01/2012		NC	05/02/2012	Continuing Noncompliance	

**Environmental Protection Agency
Integrated Compliance Information System
Quarterly Non-compliance Report **QNCR****

Data Run Date: 07/27/2014

Refresh Date: 07/28/2014

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From: 04/01/2014 To: 06/30/2014

New Mexico / Region 06

Location	Grant	RNC	Violation Date	Enforcement Action	Enforcement Date	Status	Status Date	Comments
Instance of Noncompliance								
POTW								
				Facility: VILLAGE OF CHAMA - NPDES ID: NM0027731 - FRS ID: 110009831174				
CHAMA	\$	Noncompliant						
DETAIL SECTION								
				Agency Enforcement Review (EPA)	05/16/14			
Compliance Schedule	4P	RPT	04/01/2014			NC	05/02/2014	3D - REPORT OVERDUE
Aluminum, total [as Al]	001-A	TRC	03/31/2014			NC	03/31/2014	2C - PERMIT EFFLUENT VIOLATION
BOD, 5-day, 20 deg. C	001-A	TRC	03/31/2014			NC	03/31/2014	2C - PERMIT EFFLUENT VIOLATION
Nitrogen, ammonia total [as N]	001-A	TRC	03/31/2014			NC	03/31/2014	2C - PERMIT EFFLUENT VIOLATION
Aluminum, total [as Al]	001-A	TRC	02/28/2014			NC	03/31/2014	2C - PERMIT EFFLUENT VIOLATION
BOD, 5-day, 20 deg. C	001-A	TRC	02/28/2014			NC	03/31/2014	2C - PERMIT EFFLUENT VIOLATION
Nitrogen, ammonia total [as N]	001-A	TRC	02/28/2014			NC	03/31/2014	2C - PERMIT EFFLUENT VIOLATION
BOD, 5-day, 20 deg. C	001-A	EFF	01/31/2014			NC	03/31/2014	2C - PERMIT EFFLUENT VIOLATION
Nitrogen, ammonia total [as N]	001-A	TRC	01/31/2014			NC	03/31/2014	2C - PERMIT EFFLUENT VIOLATION
Compliance Schedule	4P	RPT	01/01/2014			NC	02/01/2014	3D - REPORT OVERDUE
SUMMARY SECTION								
				Administrative Compliance Orders (EPA) 06-2008-1714 - 1	11/07/07			
Management Practice Violations - Failure to Maintain Records		DIS	09/07/2005			RP	11/07/2007	Resolved Pending
Management Practice Violations - Improper Operation and Maintenance		DIS	09/07/2005			RP	11/07/2007	Resolved Pending
Monitoring Violations - Improper Analysis or Lab Error		DIS	09/07/2005			RP	11/07/2007	Resolved Pending
Monitoring Violations - No Flow Measurement Device		DIS	09/07/2005			RP	11/07/2007	Resolved Pending

**Environmental Protection Agency
Integrated Compliance Information System
Quarterly Non-compliance Report **QNCR****

Data Run Date: 07/27/2014
Refresh Date: 07/28/2014

Page 33 of 108
From: 04/01/2014 To: 06/30/2014

New Mexico / Region 06

Location	Grant							
Instance of Noncompliance	RNC	Violation Date	Enforcement Action	Enforcement Date	Status	Status Date	Comments	
POTW								
Facility: VILLAGE OF CHAMA - NPDES ID: NM0027731 - FRS ID: 110009831174								
CHAMA	\$	Noncompliant						
			Under Review (EPA)	02/13/11				
Compliance Schedule	4P	RPT	01/01/2012		NC	02/01/2012	Continuing Noncompliance	
Achieve Final Compliance With All Obligations Under This order	1P	SCH	07/01/2010		NC	09/30/2010	Continuing Noncompliance	
Compliance Schedule	2P	RPT	07/01/2010		NC	08/01/2010	Continuing Noncompliance	
Compliance Schedule	2P	RPT	04/01/2010		NC	05/02/2010	Continuing Noncompliance	

Appendix 3
Molzen Corbin Chama Lagoon WWTP Evaluation
(Short Term Improvements)

MOLZENCORBIN

Memorandum

To: Hon. Darren DeYápp – Mayor

From: Clayton Ten Eyck, P.E.

Date: January 17, 2014

Re: Chama Lagoon WWTP Evaluation

MC Job Number: CMA101-23

The Village of Chama has received three Administrative Orders (AO) from the US EPA within the past nine years; the first in 2004, the second in 2007, and the latest in March of 2013. These AOs have come as a result of discharging effluent that does not meet the National Pollutant Discharge Elimination System (NPDES) Permit for the Village's WWTP. A Compliance Evaluation Inspection (CEI) was performed by NMED in May 2013, wherein several unsatisfactory observations were noted. Additionally, the Village received an Administrative Complaint in September 2013, related to the third AO and the discharge of insufficiently treated wastewater. Although Chama is pursuing the design of a new WWTP, it is recommended that current plant operations be modified to improve effluent quality to the extent possible.

Representatives from Molzen Corbin performed a site evaluation on Tuesday, October 22, 2013 at the Village WWTP to determine adjustments that could be made to enhance wastewater treatment. Several key observations were noted regarding deficiencies in operation. They are presented in this memorandum along with suggested interim improvements that could be made to achieve greater compliance.

Observations

The lagoons are not being operated as aerated lagoons, but as facultative ponds. The blowers are operated manually (timers are not connected to a power source), and were not running while we were onsite. As such, the only aeration being accomplished is attributed to the transfer of oxygen from the atmosphere to the surface area of the pond, which is insufficient to accomplish treatment. Aeration of the wastewater is essential to reduce levels of biochemical oxygen demand (BOD). The design of the lagoons is not appropriate for operation as facultative ponds. The full extent of treatment is not being achieved, likely contributing to BOD and total suspended solids (TSS) violations of the permit.

The chlorine contact basin is designed to provide adequate disinfection and dechlorination of the effluent. However, it appeared that the chlorine contact basin had not been cleaned in quite some time. Spider webs on the ultrasonic sensor and algae growth on the V-notch weir were observed. Also, a significant amount of foam and bubbles were floating on top of the water surface in the serpentine basin. The foam was surmised to be composed of nitrogen gas bubbles, indicative of nitrogen released by sludge that has settled on the basin floor. Additionally, the effluent was a notably greenish hue, likely due to algae and solids carried over from the lagoons.

MOLZENCORBIN

Chama Lagoon WWTP Evaluation
January 17, 2014
Page 2 of 5

Solids should be prevented from entering the chlorine contact basin, and they should not be allowed to accumulate in the serpentine basin. Solids interfere with disinfection, increase TSS concentrations, contribute to discolored effluent, and may result in violations of the NPDES permit. The chlorine contact basin should be kept clean and free of solids to achieve maximum disinfection with the least amount of chemical addition.

Each of the actions brought against the Village by the EPA has touched on inadequate record-keeping. It was noted that the operators find the influent flow meter difficult to use, and this contributes to the lack of totalized flow data. Routine monitoring of dissolved oxygen (DO), influent BOD, and influent TSS was not evident. Copies of two record-keeping forms were found at the site; however, current Discharge Monitoring Reports (DMRs) were not identified. EPA has switched to online submissions of DMRs and is no longer providing updated paper copies.

Operational Improvements

The Village could implement some simple changes in the operation of the WWTP that would immediately result in improved wastewater treatment and compliance. These include:

- Cleaning the inlet box to the lagoons. Keeping the inlet free of debris will reduce the amount of solids and floatables entering the lagoons. Additionally, if the inlet box is cleaned daily, influent temperature readings may be taken at this location.
- Closing the southeast diversion structure of the polishing pond to prevent short-circuiting.
- Measure the depth of the sludge: Use a sludge judge to determine the thickness of the sludge blanket at numerous locations in both lagoons, perhaps on a grid. To Molzen Corbin's knowledge, the lagoons have never been dredged. It is often recommended that lagoons be dredged every 20 years or so. If the sludge blanket is excessively thick, there may not be enough detention time for settling of new solids or adequate treatment, negatively impacting effluent quality.
- Calibration: Routine calibration of instruments, meters, and chemical feed pumps is recommended, not only to ensure compliance with record-keeping requirements, but also to assist the operators in adjusting operations when flow conditions change.
- Record-keeping: Molzen Corbin recommends the Village request training for the EPA's new electronic DMR, and begin submitting DMRs online, on time, and accurately.
- Preventive maintenance: Regular preventive maintenance is recommended to keep unit operations running smoothly. This includes exercising valves, checking that pumps are properly maintained, cleaning the chlorine contact basin on a regular basis, and patching cracks in the lagoon. Molzen Corbin has prepared several checklists that may be used as a guide to help the Village establish a preventive maintenance program.
- Compliance and process lab testing: The Village should perform the tests required by the NPDES permit on a timely basis. Furthermore, it is highly recommended that the Village provide the contract laboratory with a copy of the permit, to ensure the laboratory performs the tests in accordance with EPA requirements. Process monitoring is also recommended to identify if the treatment process is operating effectively. Molzen Corbin has compiled a schedule of compliance and recommended process monitoring tests for the Village's WWTP.

MOLZENCORBIN

Chama Lagoon WWTP Evaluation

January 17, 2014

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The cost estimate for the Tier 1 improvements is \$60,000 to \$75,000. A rough breakdown is as follows:

- Clean the chlorine basin: \$10,000 to \$15,000
- Controls package: \$50,000

Tier 2

- Surface aeration: Aeration of the lagoons is highly recommended. Surface aerators are suggested to minimize disturbance of the existing sludge blanket while transferring oxygen to the wastewater. Assuming six aerators are needed, it is likely that the cost will be \$100,000 to \$125,000. The WWTP frequently violated the permit limit for BOD during the years of 2007 to 2012. This pollutant is destroyed by appropriate aeration and decomposition of the organic matter in the wastewater. However, because the lagoons are not being aerated by the blowers and broken diffuser, BOD removal is dependent on oxygen transfer from the pond surface. Adding air will greatly improve the performance of the lagoons in removing BOD.
- Relocate the recycle pump: Currently, a recycle pump is located in the northeast diversion structure that includes a telescoping valve to moderate the level of the water. Molzen Corbin suggests moving the recycle pump to a location in the easternmost pond where it can be submerged about four (4) feet, to increase solids recycle. This "recycling" is the only mixing and mechanical aeration that the wastewater experiences. The pump currently transports the uppermost levels of wastewater for recirculation, where solids are least concentrated. Increasing some solids recycle will improve overall treatment.
- Removal of solids buildup in chlorination chamber and post aeration/dechlorination basin: Use of a portable submersible solids handling pump in these basins would offer the flexibility to pump solid-laden effluent back to the lagoons where the solids could settle out, preventing solid buildup. This would also facilitate future cleaning.
- Aerate the dechlorination basin: The dechlorination basin features aeration equipment used when sulfur dioxide was used to strip chlorine gas out of the effluent. Molzen Corbin recommends using the existing blower to aerate the dechlorination building, increasing DO levels as much as possible before discharging to the Rio Chamita and facilitating mixing to ensure removal of all chlorine.
- Separation of solids from effluent in the dechlorination basin: Addition of a filter or screen in the dechlorination basin would remove a large percentage of solids from the effluent. Properly designed, the filter would be lower than the basin walls and easily removed and hosed down when solids begin to clog the filter.

The cost estimate for the Tier 2 improvements is roughly \$115,000 to \$140,000. A breakdown is as follows:

- Surface aerators: \$100,000 to 125,000
- Relocating the recycle pump: \$10,000
- Portable submersible solids handling pump in chlorine contact basin and post aeration/dechlorination basin: \$5,000

MOLZENCORBIN

Chama Lagoon WWTP Evaluation

January 17, 2014

Page 3 of 5

Interim Compliance Improvements

Several improvements would enhance the WWTP performance, bringing the plant closer to routine compliance. It is understood that the Village wishes to spend minimal resources on the old WWTP, as they anticipate constructing a new plant within the next two or three years. Therefore, improvements are suggested in a "tiered" manner, to address the most pressing issues first:

Tier 1

- Clean the chlorine contact basin: Molzen Corbin recommends the chlorine contact basin be cleaned thoroughly, and routinely kept free of algae and solids buildup. The Village should consider hiring a contractor to remove (and properly dispose of) the liquid and solid contents of the entire chlorine contact basin. This would require removing the chlorine contact basin from service for two or three days. Assuming that the lagoons would need to store the wastewater generated while the cleaning occurred, both lagoons would need to be drawn down about 0.75 feet prior to taking the chlorine contact basin offline.
- Instrumentation and controls improvements: Molzen Corbin suggests adding instrumentation and controls that would improve the operator's ability to adequately record water quality/quantity parameters and provide chemical dosing. Specific instrumentation and controls that would immediately benefit operations include:
 - Sodium hypochlorite analyzer, pump, and controls
 - Sodium bisulfite pump and controls
 - Temperature probe
 - Basic PLC to manage the control of the instrumentation

The WWTP uses sodium hypochlorite for disinfection to meet E. Coli Bacteria limits, and then dechlorinates using sodium bisulfite to remove residual chlorine prior to discharge to the Rio Chamita. The WWTP has incurred several E. coli violations, and recently incurred a violation of total residual chlorine (TRC). Molzen Corbin recommends that the Village install instrumentation to automate the dosing of sodium hypochlorite and sodium bisulfite to account for changes in water quality and flow rate. The system could analyze chlorine residual and modify chemical dosing if the TRC drops below or exceeds a certain concentration.

An automated way to collect the flow meter data is recommended to assist the Operators in recording influent and effluent wastewater flows. Although the NPDES permit only requires the WWTP to report effluent, influent flows impact the detention time within the pond. It is especially important to monitor influent flows when spring runoff occurs.

Temperature affects how quickly treatment occurs. At warmer temperatures, reactions occur more quickly, and greater treatment is achieved for the same time period as colder temperatures. Influent is often several degrees warmer than ambient water in the lagoons. Accurate influent temperature data is needed to correctly design the new WWTP.

MOLZENCORBIN

Chama Lagoon WWTP Evaluation
January 17, 2014
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Tier 3

- Potential sludge removal: The third tier may possibly be needed, but ultimately depends on depth of the sludge blanket in the lagoons and the timeliness of constructing a new WWTP. If the depth of the sludge blanket prevents adequate hydraulic retention time of wastewater within the lagoons, the lagoons should be dredged to remove the sludge.

Sludge removal costs are difficult to determine. The cost will be largely affected by the depth of the sludge and the proximity of an appropriate disposal location. The lagoons have to be taken offline and dredged one at a time. Assuming a sludge depth of three feet, a very budgetary cost estimate is about \$150,000 to \$175,000 per lagoon.

Tier 4

- Filtration: A possible fourth tier improvement consists of installing a filtration system to prevent solids from escaping the lagoon in the effluent. This should only be considered if the construction of a new WWTP will be greater than seven years from now.

Conclusions

Current plant operations could be modified to bring several parameters into compliance. Simple operational changes would immediately improve effluent quality and/or compliance with record-keeping and self-monitoring requirements. Modifications to the WWTP, such as those suggested in the four tiers (cleaning the chlorine contact basin, installing automated instrumentation and controls to enhance disinfection, adding surface aerators, aerating the dechlorination basin, solids recycling pumps, sludge removal, and adding filters), will noticeably improve effluent quality.

Appendix 4

Village of Chama WWTP Pre-Design

CHAMA WWTP – Anticipated Design Schedule

Milestone	Duration (Days)	Date
Preliminary Design Submittal	180	12/27/2014
Obtain Owner/Agency Review Comments*	30	1/26/2015
Complete Project Design	90	4/26/2015
Final Owner/Agency Review*	30	5/26/2015
Advertise Project for Construction	15	6/10/2015
Construction Bid Opening	45	7/25/2015
Issue Notice of Award	30	8/24/2015

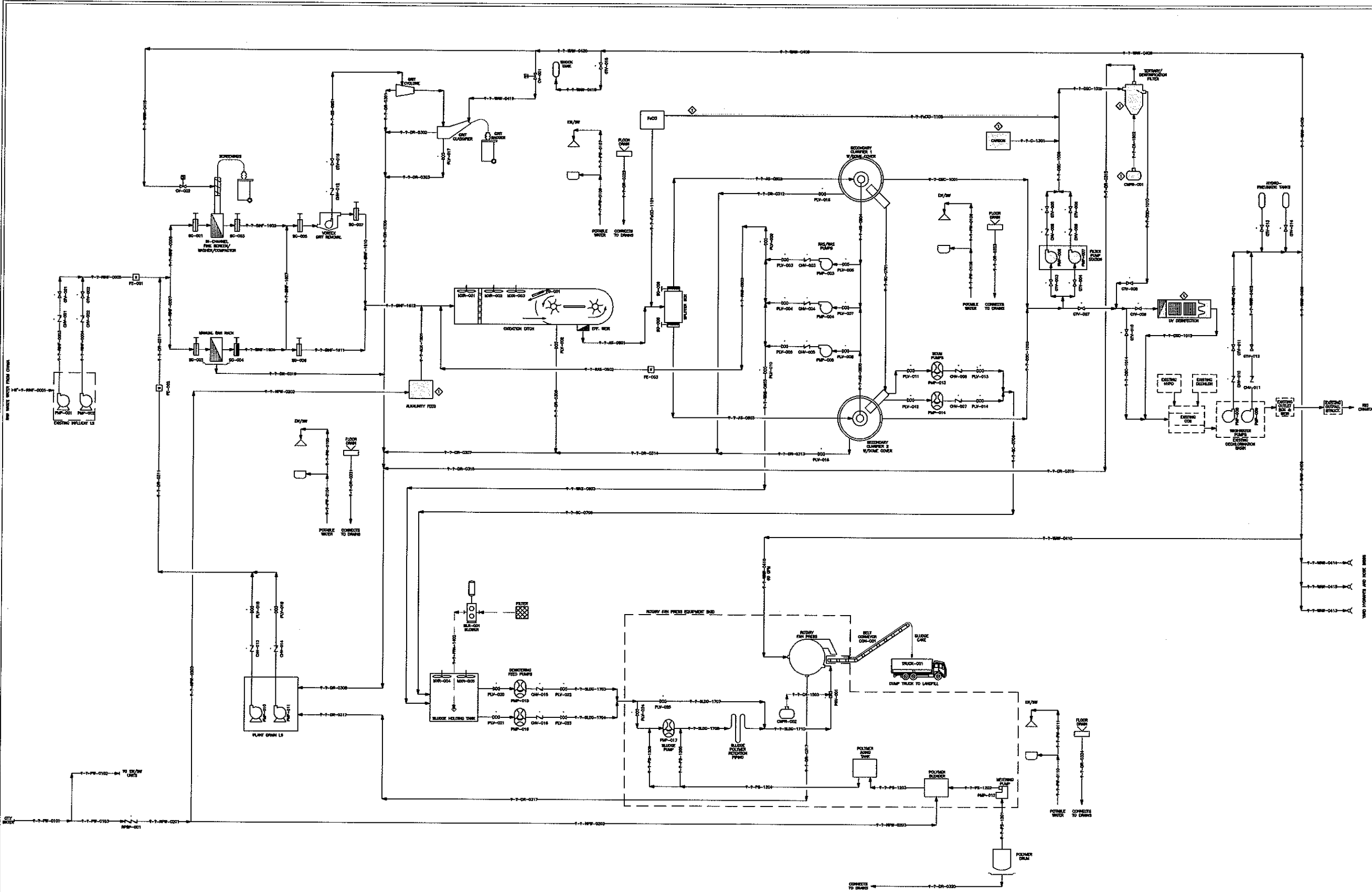
*Estimated

ENCLOSURE NO. 2

VILLAGE OF CHAMA, NM - REPLACEMENT OF EXISTING WASTEWATER TREATMENT PLANT
PROPOSED IMPLEMENTATION SCHEDULE

[illegible]

ICH-601 8/5/14 1:2



KEYED NOTES
◆ - ADDITIVE ALTERNATE EQUIPMENT.

MOLZENCORBIN

2701 Miles Road SE
Albuquerque, New Mexico 87106
505 242 5700 office
505 242 0673 fax
MolzenCorbin.com

NOTICE OF EXTENDED PAYMENT PROVISION:
THIS CONTRACT ALLOWS THE OWNER TO MAKE
PAYMENT WITHIN 45 DAYS AFTER SUBMISSION
OF AN UNDISPUTED REQUEST FOR PAYMENT

NUMERIC SCALE CONFIRMATION
DRAWINGS ARE DEPICTED AT INTENDED
NUMERIC SCALES
IF THIS BAR EQUALS ONE INCH

PRELIMINARY
NOT FOR
CONSTRUCTION

REV NO	REV DATE	DESCRIPTION
1	08/01/14	CHAMA131-13
2	08/01/14	DESIGNED BY: KM
3	08/01/14	DRAWN BY: NW
4	08/01/14	CHECKED BY: KM
5	08/01/14	PROJECT MANAGER: CHT
6	08/01/14	PROJECT DATE: AUGUST 2014

PROCESS FLOW DIAGRAM

CHAMA OXIDATION DITCH WWTTP
VILLAGE OF CHAMA
RIO ARriba COUNTY, NEW MEXICO

I-601

SHEET

© COPYRIGHT

Appendix 5

Village of Chama Proposed Implementation Schedule for WWTP and AO History

Jennifer Gallegos
MAYOR

BOARD OF TRUSTEES:

Milnor Manzanares

Ron Russom

Billy Elbrock

Scott Flury



Mary Jo Piña
JUDGE

Denise Valdez Gallegos
CLERK

Marla Ulibarri
TREASURER

Kenneth C. Downes & Asso. P.C.
ATTORNEY

April 25, 2014

Mr. Efren Ordonez
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Mr. Anthony Loston
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

RE: Village of Chama, New Mexico
Administrative Complaint – Permit Number NM0027731
Docket No. CWA-06-2013-1863

Dear Mr. Ordonez and Mr. Loston:

The Village of Chama respectfully submits the following information for consideration by the EPA in your review of the Administrative Complaint (Docket No. CWA-06-2013-1863) issued in September of last year.

Enclosure No. 1

Enclosure No. 1 has been provided as a summary of history starting with the first Administrative Order (AO) issued by the EPA to the Village of Chama in 2004 to present. This attempts to document the efforts made by the Village to correct the noted issues with their wastewater treatment plant (WWTP).

Enclosure No. 2

Enclosure No. 2 provides the Village's proposed implementation schedule for design, construction, and startup of their new WWTP.

The Village has spent a significant amount of time with the New Mexico Environment Department (NMED) and our state representatives pushing for funding of a new WWTP. As all the technical and economical evaluations have shown to date (2011 PER, 2014 PER Supplement), the Village and its residents could not bear the costs for constructing and operating a new WWTP without substantial financial assistance in the

Mr. Efren Ordonez / Mr. Anthony Loston

April 25, 2014

Page 2

form of grants. In March of this year, the Governor for the State of New Mexico and the State Legislature recognized the criticality of constructing a new WWTP for the Village of Chama and the lack of available funding capacity through user rates by granting \$8 million through Capital Outlay.

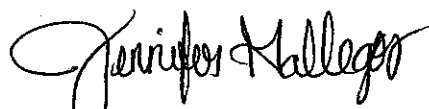
The Village's new administration fully recognizes our obligations to adhere to the requirements outlined in the NPDES Permit and takes these responsibilities very seriously. We have begun the search for a new WWTP operator and plan to have hired someone for this position by July of this year. Securing a full time, dedicated, and qualified operator will improve the performance of the existing WWTP and the corresponding effluent quality to the extent possible for an almost 30 year old facility.

The Village of Chama is a small community with limited financial capabilities. In recognition of the \$10,000 civil penalty proposed by the EPA, the Village of Chama would request consideration for investing this money to address some of the noted WWTP deficiencies. With the \$10,000, the existing disinfection system at the WWTP could be upgraded by installing controls to loop the signal from the effluent flow meter to the sodium hypochlorite (chlorination) and sodium bisulfite (dechlorination) metering pumps. This will allow for more consistent dosing of these chemicals based on flow fluctuations to address E-coli exceedances and ensure total residual chlorine (TRC) is removed prior to discharge. Implementation of this improvement could occur within 120 days.

We appreciate your consideration of our circumstances and the recognition that with the construction funding secured, certainly the most significant hurdle in our pursuit of a new WWTP. The Village is now in a firm position to address the effluent quality issues which have plagued our community for many years.

Sincerely,

VILLAGE OF CHAMA



Jennifer Gallegos, Mayor

Enclosures

cc: Mr. James Hogan, NMED Surface Water Quality Bureau, Bureau Chief
Mr. Jim Chiasson, P.E., NMED Construction Programs Bureau Chief
Ms. Denise Gallegos, Municipal Clerk, Village of Chama
Mr. Billy R. Elbrock, Councilor, Village of Chama
Mr. Milnor Manzanares, Councilor, Village of Chama
Mr. Ron Russom, Councilor, Village of Chama
Mr. Scott Flury, Councilor, Village of Chama
Mr. Adelmo Archuleta, P.E., Owner/President, Molzen Corbin
Mr. Clayton Ten Eyck, P.E., Project Engineer, Molzen Corbin

ENCLOSURE NO. 1

The Village of Chama Wastewater Treatment Plant (WWTP) discharges effluent to the Rio Chamita under the National Pollutant Discharge Elimination System (NPDES) Permit No. NM0027731. Several changes in the NPDES Permit have occurred since 1986, when the Village's existing treatment facilities were constructed. Although the discharge permit has been greatly altered during the past couple of decades, the treatment facility remains largely the same, featuring aerated lagoons that are incapable of meeting the limits set by recent NPDES Permits. Many key events have occurred in the past decade, most of them oriented towards more stringent effluent quality requirements and enforcing actions by regulatory agencies. A summary of the most relevant events pertaining to the operation and compliance of the WWTP as well as remedial actions are summarized in Table 1.

TABLE 1
HISTORY OF EVENTS RELATED TO THE VILLAGE OF CHAMA, NM
WASTEWATER TREATMENT PLANT OPERATION

YEAR	MOST RELEVANT EVENTS
2004	In December, the Environmental Protection Agency (EPA) issued an Administrative Order (AO) against the Village for failure to meet permit limits.
2005	As a result of the 2005 AO, the Village selected Molzen Corbin to prepare a PER to evaluate wastewater treatment technologies for a new WWTP .
	Work on the wastewater PER was started in June. During the review of historical flow data, serious inflow and infiltration (I&I) problems were detected and work on the PER was suspended to focus all efforts on reducing I&I problems.
	Discussions with NMED revolved around upcoming changes in the NPDES Permit, most notably the addition of an aluminum limit, and also about the I&I issue.
2005 2006	Molzen Corbin performed nighttime sewer line inspections on June 26, 2005, October 26, 2005, and May 17, 2006. Inspections showed that the infiltration appeared to be the result of snowmelt that increased groundwater flow, but that the exact point of infiltration could not be determined without a comprehensive sewer system evaluation survey (SSES).
2007	The Village received a second AO in November 2007.
	During renewal of the NPDES permit , limits for ammonia and total phosphorous (TP) monitoring requirements were included. Total nitrogen (TN) monitoring requirements were <u>not</u> included at that time.
2008	The Village responded to 2007 AO and attended a follow-up meeting at EPA's Region 6 Offices . An "Action Plan" was presented to the EPA.

TABLE 1 (continued)

YEAR	MOST RELEVANT EVENTS
2008	In June, the Village and Molzen Corbin met with NMED to discuss residual I&I problems, the postponed PER, compliance issues and the resulting AOs, and the potential additional limits (nutrients) to the permit. NMED's Representatives indicated that in upcoming permit, the Village would likely face nitrogen and phosphorous limits.
2008 2009	Projects on addressing and minimizing I&I issues: Winter 2008, completed the 22nd Street Project which consisted of televising 7,000 ft of sewer line, slip lining 1,550 ft of existing sewer, and manhole repair, replacement, rehabilitation. Fall 2009, completed a comprehensive SSES. This project consisted of cleaning and televising 28,000 ft of sewer line, 12 spot repairs, inspection of 62 manholes, and pipe bursting 2,600 ft of existing sewer pipe.
2010	In July, the Village of Chama requested that the NMED evaluate the effect on discharge limitations for an alternate discharge location at the Rio Chama . The NMED responded that Rio Chama was also impaired. Work on the PER was resumed in August. NPDES Permit issued on July 1, 2007 expired on September 30, 2010. NPDES Permit renewal application was submitted in September.
2011	Draft PER completed in February ; the recommended process was the AeroMod technology (Sequox process, which is a three-stage activated sludge process) to be followed by denitrification and phosphorous removal filters. A couple of days after the PER was completed, the NMED published the Draft Total Maximum Daily Load (TMDL) for public comment . Seasonal limits were proposed, but included a short winter season. Summer limits were 3.0 mg/L TN and 0.1 mg/L TP. The Village requested that NMED consider the financial implications of the TMDL and extend the cold season in the permit. In June, the draft NPDES Permit became available for public comment . The Village submitted a letter to the EPA requesting that the financial implications to their residents be taken into consideration when issuing a new permit . TN was included in new permit without previous monitoring and reporting requirements. In August, the EPA approved the final TMDL , which includes warm season (May 1 to September 30) limits of 4.0 mg/L TN and 0.4 mg/L TP, and cold season (October 1 to April 30) limits of 10.0 mg/L TN and 1.0 mg/L TP. In September, the PER was finalized and approved by NMED . The Final PER recommended use of the Sequox process by AeroMod followed by denitrification and phosphorous removal filters. The new NPDES Permit became effective on November 1, 2011 with a schedule of compliance to meet permit limits, including stringent TN and TP effluent concentrations, no later than October 30, 2016.
2012	The Village upgraded the influent lift station at the WWTP including replacement of the pumps and control panel, electrical upgrades, installation of a standby generator, and recoating of the wet well.

TABLE 1 (continued)

YEAR	MOST RELEVANT EVENTS
2013	In January, the Village selected Molzen Corbin to design a new WWTP . After touring several WWTPs (June 2013), the Village's Mayor and Council decided they wanted a biological nutrient removal process coupled with a MBR. This decision was heavily influenced by the extremely cold climate in Chama and the Village's commitment to compliance with permit limits. Design began immediately upon selection of a treatment alternative by the Village. NMED Representatives directed Molzen Corbin to prepare a PER Amendment to reflect the technology changes requested by the Village, in parallel with the design efforts
	In July, Molzen Corbin met with several representatives from NMED to understand the hardness-dependent aluminum limit set forth by EPA. The general consensus was that aluminum would likely not be an issue because the NMED expects the Rio Chamita will be delisted for aluminum at the next TMDL update due to the new hardness-dependent approach for evaluating aluminum impairment. Towards the end of this meeting, the subject matter turned to the ability of Chama to obtain funding for this project. The MBR plant would be costly due to the stringent effluent limits and the advance treatment process required for consistent compliance, especially for such a small population. Molzen Corbin's Engineers confirmed that even the expected operational costs associated with the new plant are significantly greater than Chama's residents and businesses can afford as was presented in the 2011 PER. The level of complexity to consistently comply with the NPDES Permit and the corresponding cost appeared unreasonable for a small village with minimal financial resources. This has been noted many times by the Village in correspondence with both the NMED and the EPA. However, without documentation relieving the Village of the limits specified in the NPDES Permit, Chama would be held responsible for meeting the limits, regardless of cost.
	In August, Molzen Corbin submitted the PER Amendment to NMED and addressed NMED's review comments.
	In September, the Village received a letter from EPA regarding a Civil Penalty due to recurring NPDES Permit violations.
	NMED did not approve the PER Amendment , but sent a letter (dated 11/12/13) offering the Village two options (copy enclosed). The Village selected Option 2, which resulted in the preparation of a PER Supplement to reevaluate the technologies capable of nutrient removal and phased implementation.
	Design work stopped as of November 2013. Authorization for the PER Supplement was issued at the end of December 2013.
2014	In February, the PER Supplement was submitted for review by NMED .
	The Governor and State Legislature granted the Village of Chama \$8 million in Capital Outlay for construction of a new WWTP
	Review comments from the NMED were received for the PER Supplement in March 2014.
	The Final Draft of the PER Supplement was submitted on April 24, 2014. Design of the new WWTP will resume shortly.

Honorable Darren De Yapp

November 12, 2013

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the estimate by your consultants. As we discussed at the meeting, NMED has serious concerns about the Village's ability to afford these costs over the design life of the facility with currently only 389 rate payers. Furthermore, NMED is concerned about the potential of spending \$900,000 dollars in grant money for planning and design that the Village has received from NMED's Construction Programs Bureau resulting in a design that may never be built because the costs are not economically affordable for your community. This result would not only be wasteful of the limited resources that the State has to fund design of such projects, it also will at the end of the design phase put the Village no closer to addressing the current deficiencies in your WWTP identified by EPA under their enforcement action – ultimately placing the Village in a worse position with EPA enforcement. If the Village chooses this path NMED will require minimum rate increases to cover operation and maintenance costs as an assurance that the Village is willing to accept the responsibility to operate this design for the next 25 years. If the Village is willing to commit to this rate increase prior to completion of the design phase then NMED will offer its assistance in finding the funds to build this facility. This commitment would have to take the form of an approved, irrevocable rate increase ordinance by the Village Council sometime in the near future. Funds for the remaining design would only be released upon successful completion of this step. The Village would also have to commit in writing to hire a competent Level III Wastewater Operator prior to the commencement of construction of the facility.

The second option we discussed at the meeting is to step back from an MBR design and select a design that is more affordable, addresses the current enforcement issues, and leads to a reduction in nutrient loading although admittedly not enough to meet the permit limits. This option should include the ability for upgrades to increase nutrient treatment in the future if necessary and when affordable. From our perspective, this approach would lead to a less costly alternative that is economically affordable for the Village in the long run and will address the current enforcement issues related to effluent quality. The major disadvantage of this approach is that it will not ensure compliance with nutrient limits in the current permit which become effective in October of 2016. As we discussed in our meeting, however, NMED is aware of the issues with nutrient limits based on State adopted TMDLs and is working on several fronts to address this issue. A brief summary of these activities is as follows:

- (1) NMED is evaluating the approach used for nutrient TMDL – this includes how we determine the critical low flow. Based on the outcome of this evaluation it may be appropriate to revisit the Chama TMDL to determine if changes are necessary.
- (2) NMED is drafting language to be adopted in our water quality management plan for nutrient TMDL implementation that would recognize economic factors / affordability and set permit effluent limits in accordingly.
- (3) NMED has drafted provisions to allow for the adoption of temporary standards. One of the factors that would allow for their adoption is substantial and widespread economic and social impact. The provisions are to be proposed as part of the upcoming Triennial Review of Water Quality Standards.

Should the Village choose this option, NMED would be willing to work with you on any and all of these approaches to address future compliance with nutrient limits in your NPDES permit.

Please let us know at your earliest convenience what avenue you would like to pursue in the future. Please don't hesitate to contact or meet with us in person to further discuss any of the options outlined above or explore alternatives.



SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau

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RYAN FLYNN
Cabinet Secretary-Designate

BUTCH TONGATE
Deputy Secretary

ERIKA SCHWENDER
Director
Resource Protection Division

November 12, 2013

Honorable Darren De Yapp
Mayor, Village of Chama
P.O. Box 794
Chama, NM 87520

Re: Village of Chama Wastewater Treatment Plant NPDES Permit Number NM0027731

Dear Mayor De Yapp:

On September 30, 2013 The Village of Chama, Molzen Corbin Engineers, and the Construction Programs Bureau (CPB) and Surface Water Quality Bureau (SWQB) of the New Mexico Environment Department (NMED) met to discuss the Village of Chama's Wastewater Treatment Plant (WWTP). During this meeting we discussed the current status of the design for a new WWTP and our concerns about the present approach. This letter is a follow-up to this discussion to clarify the options and associated requirements for the Village of Chama.

As we see it there are three challenges facing the Village of Chama with the design of a new WWTP:

- (1) Addressing the deficiencies identified in EPA's Administrative Order
- (2) Meeting nutrient limits and the associated compliance schedule for the current NPDES permit that will become effective October 30, 2016
- (3) Financing the capital cost for the new facility being designed and paying for the on-going O&M costs of that facility

We would like to explore two approaches for the Village's path forward. Our discussion will include advantages and disadvantages of each approach as well as the assurances NMED will need and the assistance we can provide under each option.

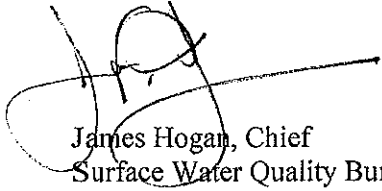
The first option is to continue with the current MBR design. We recognize that this is an attractive option for the Village as it will address not only the issues raised in the current EPA enforcement action but will also meet the nutrient permit limits that will become effective in three-year's time. As such this option affords a high level of assurance to the Village that there will not be further enforcement issues from EPA. The downside of this option is that the capital costs are currently estimated at \$10 million and the on-going O&M costs will necessitate increasing sewer rates to a minimum of \$85 dollars/month based on

Honorable Darren De Yapp

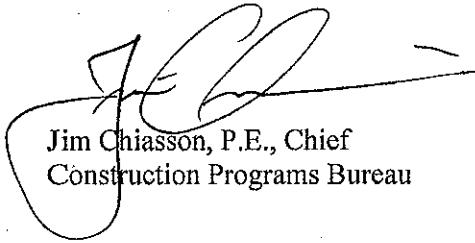
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Sincerely,

A handwritten signature in black ink, appearing to be 'J. Hogan', written over a horizontal line.

James Hogan, Chief
Surface Water Quality Bureau

A handwritten signature in black ink, appearing to be 'J. Chiasson', written over a horizontal line.

Jim Chiasson, P.E., Chief
Construction Programs Bureau

cc: Clayton Ten Eyck, P.E., Molzen Corbin
Barbara Cooney, SWQB, via email
Tom Brandt, P.E. CPB, via email
Brent Larsen USEPA via e-mail
Anthony Loston USEPA, via e-mail