

**Region 6 Compliance Assurance and Enforcement Division  
INSPECTION REPORT**

|                                        |                                               |                                     |                |
|----------------------------------------|-----------------------------------------------|-------------------------------------|----------------|
| Inspection Date(s):                    | June 8, 2016                                  |                                     |                |
| Media:                                 | Water                                         |                                     |                |
| Regulatory Program(s)                  | Clean Water Act 308(A)(B)                     |                                     |                |
| Company Name:                          | City of Farmington                            |                                     |                |
| Facility Name:                         | City of Farmington Wastewater Treatment Plant |                                     |                |
| Facility Physical Location:            | 1395 South Lake St.                           |                                     |                |
| (city, state, zip code)                | Farmington, New Mexico 87401                  |                                     |                |
| Mailing address:                       | 800 Municipal Drive                           |                                     |                |
| (city, state, zip code)                | Farmington, New Mexico 87401                  |                                     |                |
| County/Parish:                         | San Juan County                               |                                     |                |
| Facility Contact:                      | Ruben Salcido                                 | Water/Wastewater Operations Manager |                |
|                                        | phone: 505-599-1284 email: rsalcido@fmtn.org  |                                     |                |
| FRS Number:                            | 110017838722                                  |                                     |                |
| Identification/Permit Number:          | NM0020583                                     |                                     |                |
| Media Number:                          | N/A                                           |                                     |                |
| NAICS:                                 | 221320                                        |                                     |                |
| SIC:                                   | 4952                                          |                                     |                |
| Personnel participating in inspection: |                                               |                                     |                |
| Dean Roquemore                         | CH2M                                          | Operations Manager                  | 505-325-7027   |
| Ron Rosen (Initial only)               | CH2M                                          | Project Manager                     | 505-486-3511   |
| Jeff Smaka (Initial only)              | City of Farmington                            | Water/Wastewater Admin.             | 505-599-1283   |
| Ruben Salcido (Exit only)              | City of Farmington                            | Water/Wastewater Ops Mgr.           | 505-599-1284   |
| Mike Tillman                           | U.S. EPA Region 6                             | Environmental Scientist             | 214-665-7531   |
| David Long                             | U.S. EPA Region 6                             | Environmental Scientist             | 214-665-7323   |
|                                        |                                               |                                     |                |
|                                        |                                               |                                     |                |
|                                        |                                               |                                     |                |
|                                        |                                               |                                     |                |
| EPA Lead Inspector                     | <i>Mike Tillman</i>                           |                                     | <i>9/6/16</i>  |
| Signature/Date                         | Mike Tillman                                  |                                     | Date           |
| Supervisor                             | <i>Carol Peters</i>                           |                                     | <i>9/12/16</i> |
| Signature/Date                         | Carol Peters                                  |                                     | Date           |

## Section I - INTRODUCTION

### PURPOSE OF THE INSPECTION

A U.S. Environmental Protection Agency (USEPA) compliance evaluation inspection (CEI) was performed at the City of Farmington Wastewater Treatment Plant (WWTP) located at 1395 South Lake Street, Farmington, New Mexico on June 8, 2016. The inspection was conducted under the guidelines established by the USEPA under the National Pollutant Discharge Elimination System (NPDES) for wastewater treatment systems. This scheme neutral, targeted site visit, was performed as a part of the USEPA Region 6's Annual Commitment System (ACS) inspection commitment and its' purpose was to inspect and review current operations as compared to their NPDES permit requirements. An entry briefing was conducted by EPA-Region 6 inspector Mike Tillman at 9:00 a.m. and the inspector met with Dean Roquemore, CH2M Operations Manager who was present for the site tour, laboratory QA/QC review and exit interview. Ron Rosen, CH2M Project Manager and Jeff Smaka, City of Farmington Water/Wastewater Administrator joined the inspection at 9:45 a.m. and was present for the remainder of the entry briefing. Ruben Salcido, City of Farmington Water/Wastewater Operations Manager joined the inspection for the exit interview at 4:15 p.m. (See Sign-In Sheet, Appendix 2.) EPA inspector Mike Tillman, was accompanied by EPA inspector David Long in the course of conducting this CEI. During the entry briefing, the EPA inspectors provided credentials and explained the purpose of the inspection.

### FACILITY DESCRIPTION

The City of Farmington WWTP is a major municipal discharger with a design flow of 6.67 million gallons a day (MGD), an average daily flow of 5.0 MGD, and a 12.0 MGD instantaneous maximum flow. The activated sludge treatment plant operates under NPDES permit NM0020583. Plant operations are contracted out to CH2M, who renewed its contract in January 2016 for another 8 years. The discharge from the WWTP is to the San Juan River. The designated uses for the San Juan River segment 20.6.4.401 include; public and industrial water supply, irrigation, livestock watering, wildlife habitat, primary contact, marginal coldwater aquatic life and warmwater aquatic life.

It is estimated that approximately 95% of the City's 53,000 population is served by this WWTP. The remaining 5% is comprised of wastewaters from the community of Kirtland; McGee Park, a county facility comprised of a race track and casino; and hauled septic wastes from San Juan County. The number of loads hauled to the Farmington WWTP fluctuates between 300-500/year. Each load receives a visual inspection and is sampled for pH. Each month, five loads are randomly sampled for local limits parameters (metals and cyanide.)

The Farmington wastewater collection system is a gravity flow system with 19 lift stations. Each station is equipped with a standby generator and automatic switchover in the event of power loss. The generators are tested monthly by plant personnel to verify system readiness. Additionally, plant personnel are connected via radio and cell phone with maintenance staff on call seven days a week to handle any emergencies. The City of Farmington owns the Animas and Bluffview electric power generation plants which provide the power to operate the WWTP. In the event of a power outage,

electric power can be rerouted via the power grid through a single feed to keep the plant operating. However, should the power feed be a problem, the WWTP has an emergency generator located at the headworks of the plant with the capacity to operate the main lift station in the plant. From that point on, the rest of the treatment process can take place through gravity flow.

The WWTP receives hauled septic waste (septage) at the headworks of the treatment plant outside the main gate. Wastewater treatment begins with the influent entering at the headworks of the plant where it is pumped up grade via the main lift station to the initial screening process. Non-organic solids and grit from the screens are fed by conveyor into a compactor/grinder; then to a dumpster for disposal. Next, the influent passes through parallel aerated grit basins for further separation of solids, which when combined with solids from the screening process are disposed of in the San Juan County Landfill. At this point, the influent is divided and sent to one of two primary clarifiers, A or B. Sludge drawn from these primaries is pumped to primary sludge digesters #1 and #2. The supernate from the primaries is split with 25% of the flow being sent to each of two trickling filters (A and B), with the remaining 50% being routed to the Medium Rate Activated Sludge (MRAS) unit. The MRAS is a modified race track, having both aerobic and anoxic zones. Flow from the MRAS is sent to the MRAS secondary clarifier and the flow from trickling filters A and B is sent to secondary clarifier A. (Secondary clarifier B is no longer in service.) The flow from both secondary clarifiers is combined and routed to the chlorine contact chamber for disinfection, followed by dechlorination. Treated effluent passes through a two foot Parshall flume combined with a sonic flow meter and continues via pipeline to the San Juan River.

Sludge from secondary clarifier A (trickling filter) is sent back as seed to the headworks of the plant. Sludge from the MRAS secondary clarifier is pumped to the primary sludge digesters #1 and #2. The sludge from the primary digesters is pumped to the secondary sludge digester. From March through October, sludge from the secondary digester is passed through a belt press for dewatering and then it is trucked to San Juan County Landfill. During the months of November through the end of February, the cold weather season, the secondary sludge is sent to on-site sludge drying beds. After sufficient drying time, this sludge is also trucked to the county landfill. Supernate from the sludge aeration chamber, which is adjacent to the secondary sludge digester, is sent back to the headworks of the plant. The facility generated 2,076.63 dry metric tons of sludge in 2015 (See WWTP Site Plan, Appendix 3.)

A review of Farmington's discharge monitoring reports (DMRs) indicate with the exception of total dissolved solids (TDS), the facility has been in compliance with all permit limitations over the past 12 months. The TDS compliance issues are expected to be remedied upon renewal of the facility's NPDES permit which is proposing to increase the TDS limit.

The Farmington WWTP is staffed with six operators and one maintenance person. All operators are Level IV with the exception of one, which is a Level II. The plant is manned 24 hours a day, seven days a week. Typically one operator is on duty at the plant from the hours of 5:00 pm to 7:00 am, but other operators can be called in if needed. The on-site laboratory is staffed by three lab techs, two of which are in training, and one lab supervisor.

The facility maintains written standard operating procedures to guide plant personnel in the performance of routine plant maintenance and repairs. Spare pumps, standby blowers, and an additional JWC washer/compactor are stored on-site. A local contractor is available if there is a need for major repairs or parts not stored on-site. "Maintenance Connection", a computer program, generates and tracks work orders for preventative maintenance and repairs (See example work order, Appendix 4.) At the time of inspection, the north grit basin was temporarily out of service for routine maintenance and is awaiting the arrival of repair parts. The south grit basin is fully functional and capable of handling the plant flow until the north basin can be brought back on-line. A Supervisory Control and Data Acquisition (SCADA) system with alarms, monitors each of the treatment processes within the plant.

A \$27 million plant expansion (Phase III) is in the planning stages and is awaiting the submission of construction bids. The project is proposed to begin by the end of 2016 and will include the installation of a UV disinfection system, additional solids handling capacity, and the addition of another MRAS basin and clarifier.

Chemicals stored on site include sodium hypochlorite for disinfection, sodium bisulfite for dechlorination, and degreaser for use at the main lift station at the headworks. All large volumes of chemistry are stored in self-contained storage areas or containers for spill protection and control.

## **Section II - OBSERVATIONS**

### **Plant Tour:**

During the site tour, I observed the plant grounds, areas around the various treatment basins, and security fencing were all maintained, in good condition, and clean. Hazardous areas were well marked and safety systems appeared to be in place.

During the inspection of primary clarifier A, I observed the primary influent was dark brown in color, heavy with suspended solids and having a film with gas bubbles collecting at the surface. Areas of the weirs and side walls exhibited some collection of debris and grease (See photos pages 8 – 10 and 15, Appendix 1.) I discussed my observations with Dean Roquemore and he indicated the darker color of the influent in the primaries and throughout other areas of the plant were due to the plant transitioning from the colder operating temperatures of the winter months to the warmer temperatures of the summer. Dean also indicated the weirs are on a regular maintenance schedule and are due to be cleaned by the end of the week.

Treated effluent passes through a two foot Parshall flume combined with a sonic flow meter and continues via pipeline to the San Juan River. The sonic flow meter is calibrated and logged once each month (See photo page 19, Appendix 1.) At the time of inspection, the sonic meter was reading 5.9 MGD, compared to the calculated parshall flume reading of 6.0 MGD.

### **Laboratory:**

Following the site tour, facility paperwork used to generate DMR data was reviewed for both precision and accuracy with no deficiencies noted. With the exception of TDS (which is being addressed with renewal of the NPDES permit), the facility has not reported any DMR violations in the past 12 months. The City of Farmington WWTP laboratory was inspected for compliance with 40 CFR 136 analytical methods. During this part of the inspection it was noted that the facility is using an unapproved pour method for their total suspended solids (TSS) analysis as required by 40 CFR 136.3. However, plant personnel produced a 2007 email from EPA's Houston laboratory allowing the use of the EPA 160.2 pour method (beaker and graduated cylinder), in place of the Standard Method requirement to use a magnetic mixer and volumetric pipette, (See Appendix 5.) However, to continue to use the alternate method, a comparative study with statistical analysis is to be performed with an outside lab on at least an annual basis. There was no documentation of a comparative study having been performed.

### **Section III – AREAS OF CONCERN**

At the conclusion of the inspection, the EPA inspectors met with WWTP representatives for an exit interview at 4:15 p.m. on June 8, 2016. At that time, the inspectors discussed observations and reviewed issues noted during the inspection that might require additional follow-up or correction. These issues included:

1. An initial concern with the dark, gaseous appearance of the influent in the primary clarifiers and MRAS unit and the time required for operators to transition the plant from winter to summer operations. Management of internal processes during this transition must be closely monitored in order to optimize treatment and protect the quality of the plant's effluent.
2. Concern with grease and debris observed on the weirs and walls of the primary clarifiers at the time of inspection and the frequency at which they are being cleaned. Plant management may need to revisit the frequency at which the clarifiers are being inspected and cleaned. The current frequency is once per week.
3. The laboratory should perform at least an annual comparative study to justify the alternative pour method used for TSS analysis. The alternate method was approved by Region 6's Houston Lab in 2007 and there was no documentation of such a study having been performed.

### **Section IV – FOLLOW UP**

None required at this time.

### **Section V – LIST OF APPENDICES**

Appendix 1 – Photo Log – 24 photos taken 06/08/16

Appendix 2 – Compliance Evaluation Inspection Sign-in Sheet

Appendix 3 – WWTP Site Plan

Appendix 4 – Example plant maintenance work order

Appendix 5 – Email communication with EPA Region 6 Houston Laboratory regarding TSS Pour Method



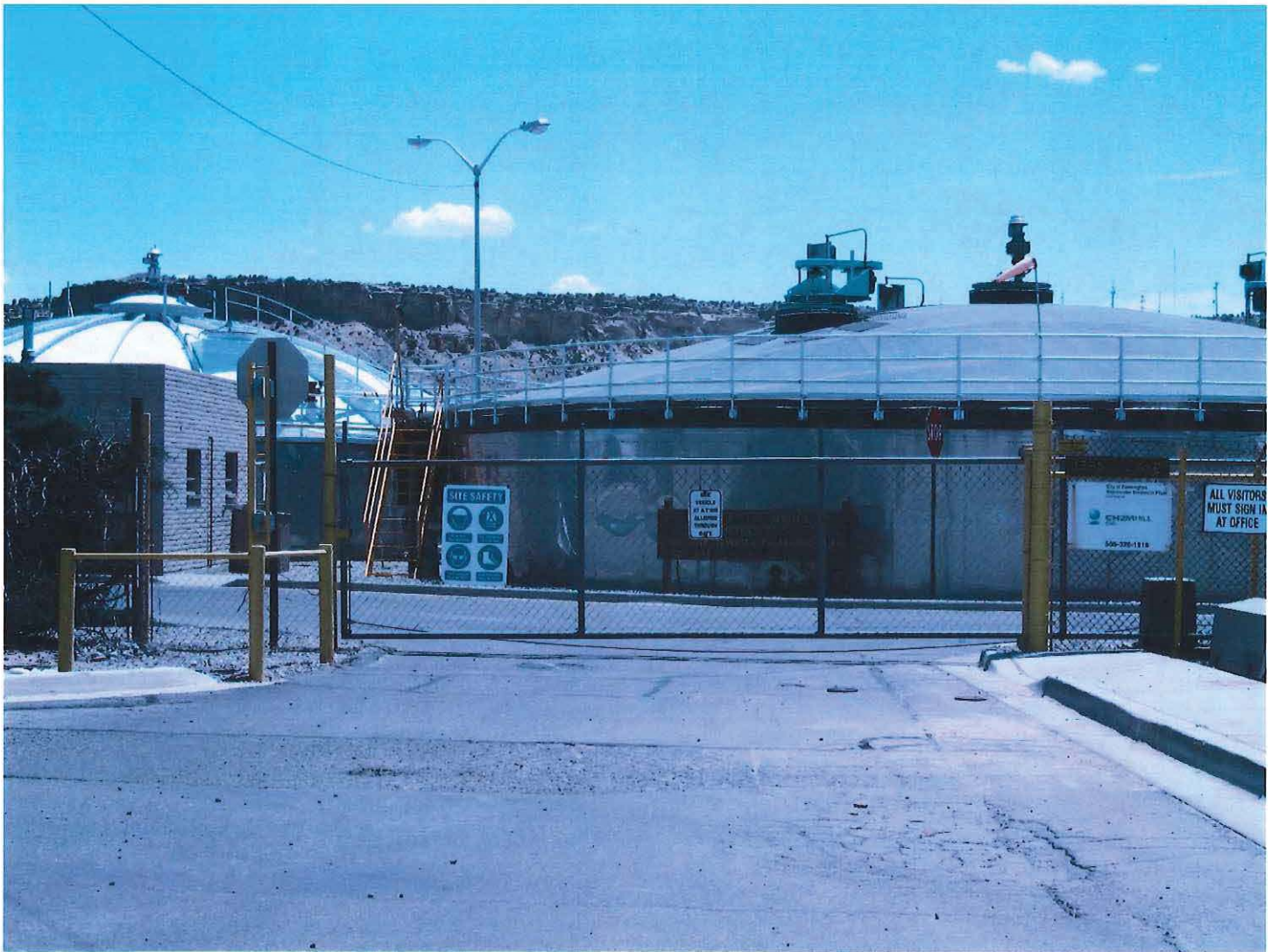
## **Appendix 1. – Photo Log**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                                               |                    |                   |
|---------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                    | Date: June 8, 2016 | Time: 3:30 p.m.   |
| City/County: Farmington / San Juan                            |                    | State: New Mexico |
| Location: City of Farmington WWTP                             |                    |                   |
| Subject: Security gate at the entrance to the Farmington WWTP |                    |                   |



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

### Official Photograph Log

|                                                                        |                    |                   |
|------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                             | Date: June 8, 2016 | Time: 11:20 a.m.  |
| City/County: Farmington / San Juan                                     |                    | State: New Mexico |
| Location: City of Farmington WWTP                                      |                    |                   |
| Subject: Hauled septage receiving station at the headworks to the WWTP |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                                  |                    |                   |
|--------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                       | Date: June 8, 2016 | Time: 11:30 a.m.  |
| City/County: Farmington / San Juan               |                    | State: New Mexico |
| Location: City of Farmington WWTP                |                    |                   |
| Subject: Main lift station at the WWTP headworks |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                                                |                    |                   |
|----------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                     | Date: June 8, 2016 | Time: 11:32 a.m.  |
| City/County: Farmington / San Juan                             |                    | State: New Mexico |
| Location: City of Farmington WWTP                              |                    |                   |
| Subject: Covered influent screens at the headworks of the WWTP |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                                                                 |                    |                   |
|---------------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                                      | Date: June 8, 2016 | Time: 11:33 a.m.  |
| City/County: Farmington / San Juan                                              |                    | State: New Mexico |
| Location: City of Farmington WWTP                                               |                    |                   |
| Subject: Compactor / Grinder with dumpster for solids disposal at the headworks |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                      |                    |                   |
|--------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman           | Date: June 8, 2016 | Time: 11:35 a.m.  |
| City/County: Farmington / San Juan   |                    | State: New Mexico |
| Location: City of Farmington WWTP    |                    |                   |
| Subject: Covered grit removal basins |                    |                   |



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

### Official Photograph Log

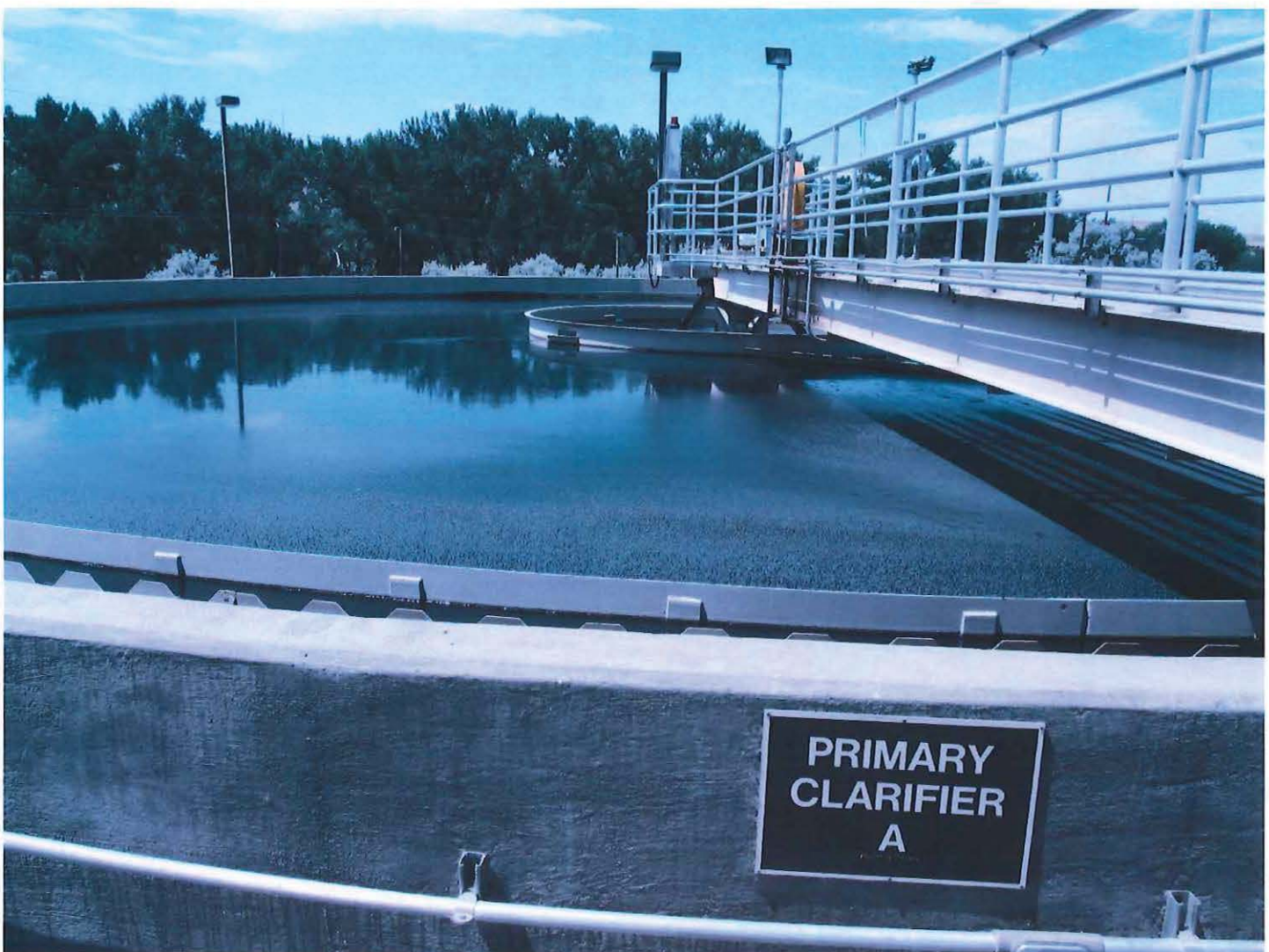
|                                                                                                           |                    |                   |
|-----------------------------------------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                                                                | Date: June 8, 2016 | Time: 11:36 a.m.  |
| City/County: Farmington / San Juan                                                                        |                    | State: New Mexico |
| Location: City of Farmington WWTP                                                                         |                    |                   |
| Subject: Backup generator for powering the lift station and other operations at the headworks to the WWTP |                    |                   |



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Official Photograph Log

|                                               |                    |                   |
|-----------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                    | Date: June 8, 2016 | Time: 11:40 a.m.  |
| City/County: Farmington / San Juan            |                    | State: New Mexico |
| Location: City of Farmington WWTP             |                    |                   |
| Subject: Looking south at primary clarifier A |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                                                                                                                           |                    |                   |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                                                                                                | Date: June 8, 2016 | Time: 11:40 a.m.  |
| City/County: Farmington / San Juan                                                                                                        |                    | State: New Mexico |
| Location: City of Farmington WWTP                                                                                                         |                    |                   |
| Subject: Primary clarifier A with grease / debris at the weirs and dark, gaseous influent in the settling basin<br>(Weirs cleaned weekly) |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                                                                |                    |                   |
|--------------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                                     | Date: June 8, 2016 | Time: 11:55 a.m.  |
| City/County: Farmington / San Juan                                             |                    | State: New Mexico |
| Location: City of Farmington WWTP                                              |                    |                   |
| Subject: Primary Clarifier B with dark, gaseous influent in the settling basin |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

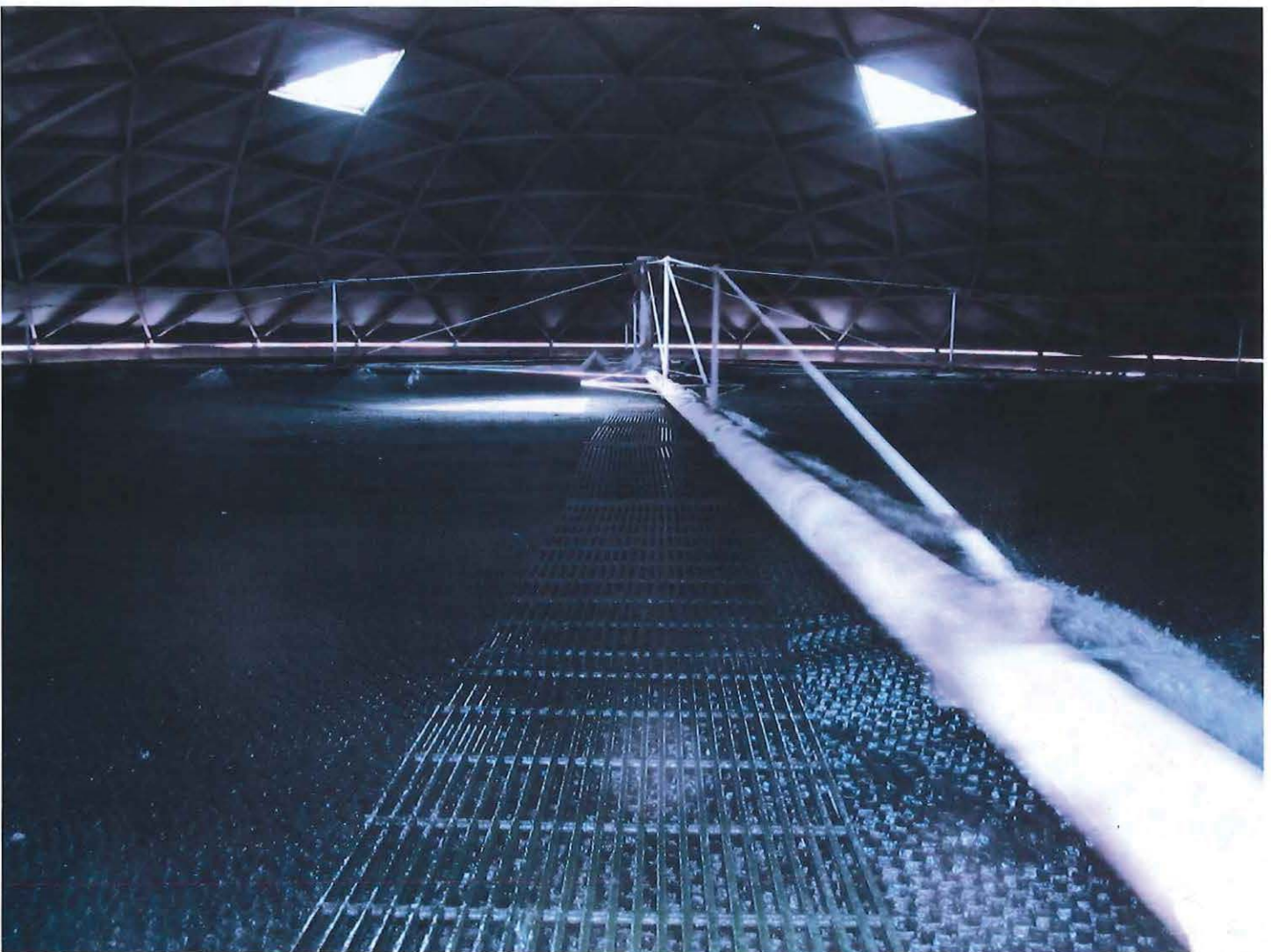
|                                                                                                                                                                                      |                    |                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                                                                                                                                           | Date: June 8, 2016 | Time: 11:45 a.m.  |
| City/County: Farmington / San Juan                                                                                                                                                   |                    | State: New Mexico |
| Location: City of Farmington WWTP                                                                                                                                                    |                    |                   |
| Subject: 3-way primary splitter box following primary clarification (25% flow to trickling filter A, 25% to trickling filter B, 50% to the Medium Rate Activated Sludge (MRAS) basin |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                                                    |                    |                   |
|--------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                         | Date: June 8, 2016 | Time: 12:00 p.m.  |
| City/County: Farmington / San Juan                                 |                    | State: New Mexico |
| Location: City of Farmington WWTP                                  |                    |                   |
| Subject: Trickling filter A (Covered to help control algae growth) |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

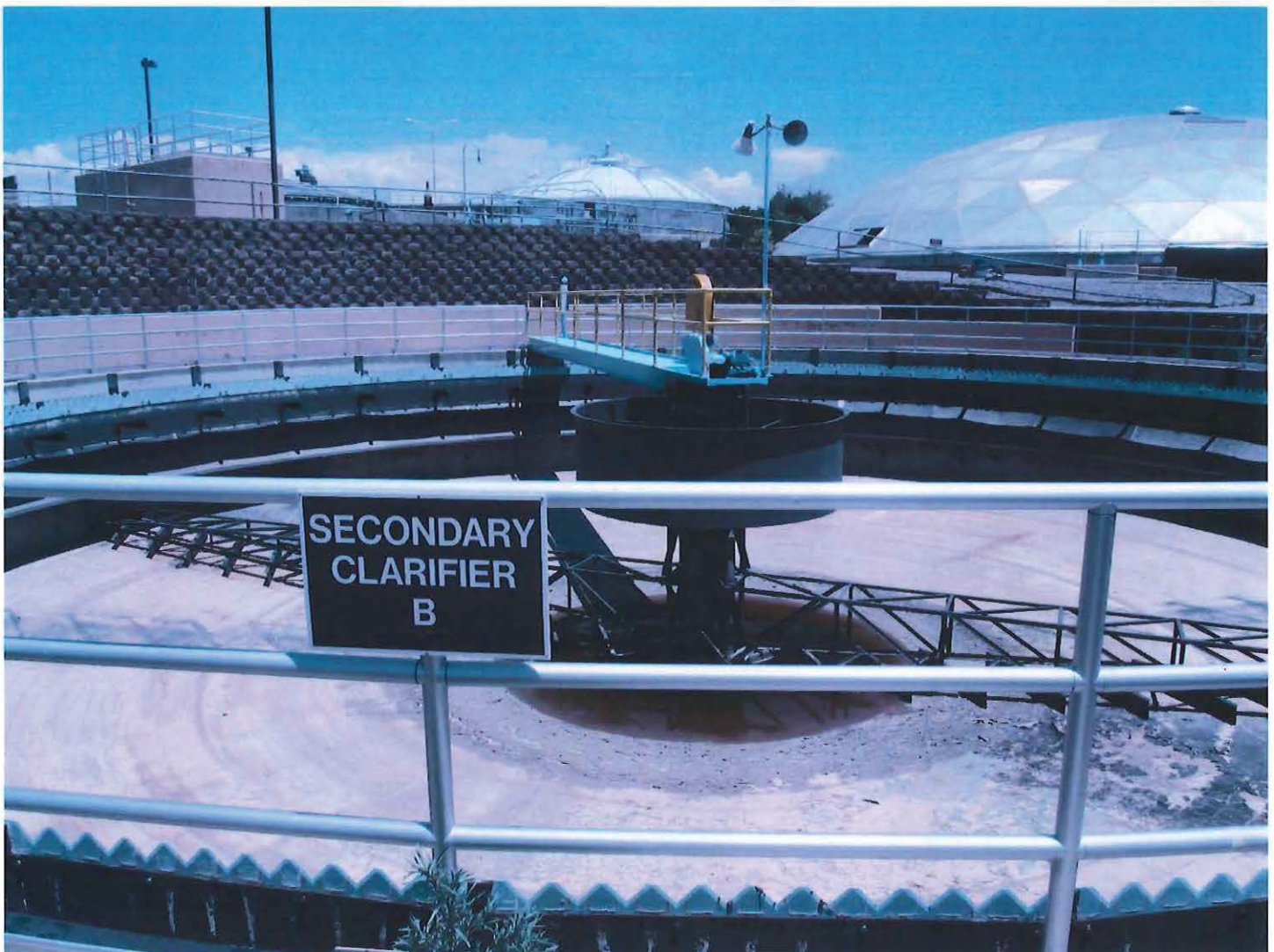
|                                                |                    |                   |
|------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                     | Date: June 8, 2016 | Time: 1:10 p.m.   |
| City/County: Farmington / San Juan             |                    | State: New Mexico |
| Location: City of Farmington WWTP              |                    |                   |
| Subject: Tricking filter secondary clarifier A |                    |                   |



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

### Official Photograph Log

|                                                                      |                    |                   |
|----------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                           | Date: June 8, 2016 | Time: 1:15 p.m.   |
| City/County: Farmington / San Juan                                   |                    | State: New Mexico |
| Location: City of Farmington WWTP                                    |                    |                   |
| Subject: Trickling filter secondary clarifier B (offline since 2004) |                    |                   |



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

### Official Photograph Log

|                                                                                               |                    |                   |
|-----------------------------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                                                    | Date: June 8, 2016 | Time: 12:05 p.m.  |
| City/County: Farmington / San Juan                                                            |                    | State: New Mexico |
| Location: City of Farmington WWTP                                                             |                    |                   |
| Subject: Medium Rate Activated Sludge (MRAS) basin, observing the dark color of the influent. |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                                                                          |                    |                   |
|------------------------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                                               | Date: June 8, 2016 | Time: 12:17 p.m.  |
| City/County: Farmington / San Juan                                                       |                    | State: New Mexico |
| Location: City of Farmington WWTP                                                        |                    |                   |
| Subject: Medium Rate Activated Sludge (MRAS) secondary clarifier to the west of the MRAS |                    |                   |



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Official Photograph Log

|                                        |                    |                   |
|----------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman             | Date: June 8, 2016 | Time: 1:05 p.m.   |
| City/County: Farmington / San Juan     |                    | State: New Mexico |
| Location: City of Farmington WWTP      |                    |                   |
| Subject: Chlorine contact basins 1 & 2 |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

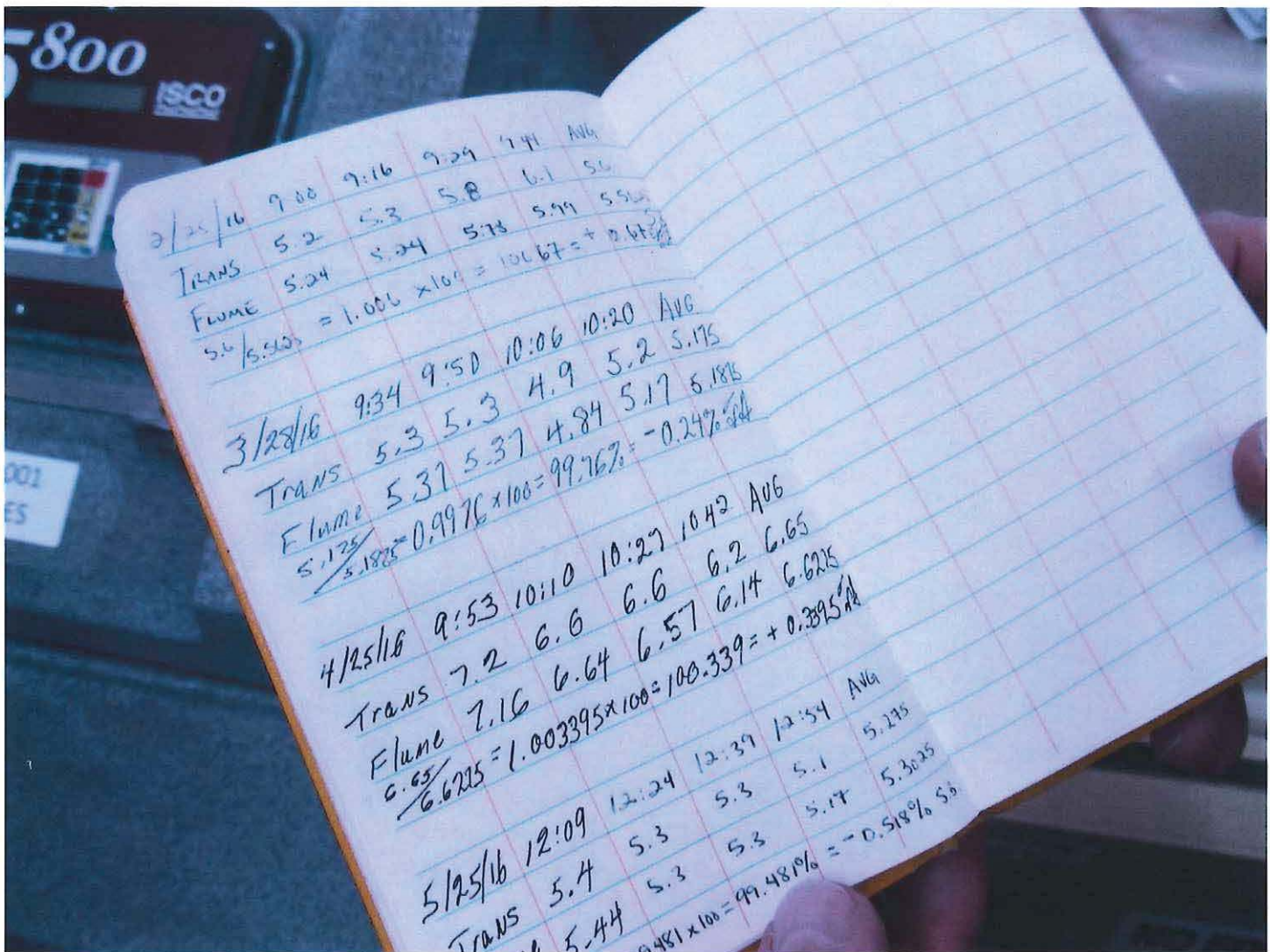
|                                                           |                    |                   |
|-----------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                | Date: June 8, 2016 | Time: 12:50 p.m.  |
| City/County: Farmington / San Juan                        |                    | State: New Mexico |
| Location: City of Farmington WWTP                         |                    |                   |
| Subject: Permitted Outfall 001 – following dechlorination |                    |                   |



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Official Photograph Log

|                                              |                    |                   |
|----------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                   | Date: June 8, 2016 | Time: 12:52 p.m.  |
| City/County: Farmington / San Juan           |                    | State: New Mexico |
| Location: City of Farmington WWTP            |                    |                   |
| Subject: Effluent flow meter calibration log |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                                                                              |                    |                   |
|----------------------------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                                                   | Date: June 8, 2016 | Time: 1:05 p.m.   |
| City/County: Farmington / San Juan                                                           |                    | State: New Mexico |
| Location: City of Farmington WWTP                                                            |                    |                   |
| Subject: 27" to 24" Outfall junction box – immediately following permitted Final Outfall 001 |                    |                   |



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

### Official Photograph Log

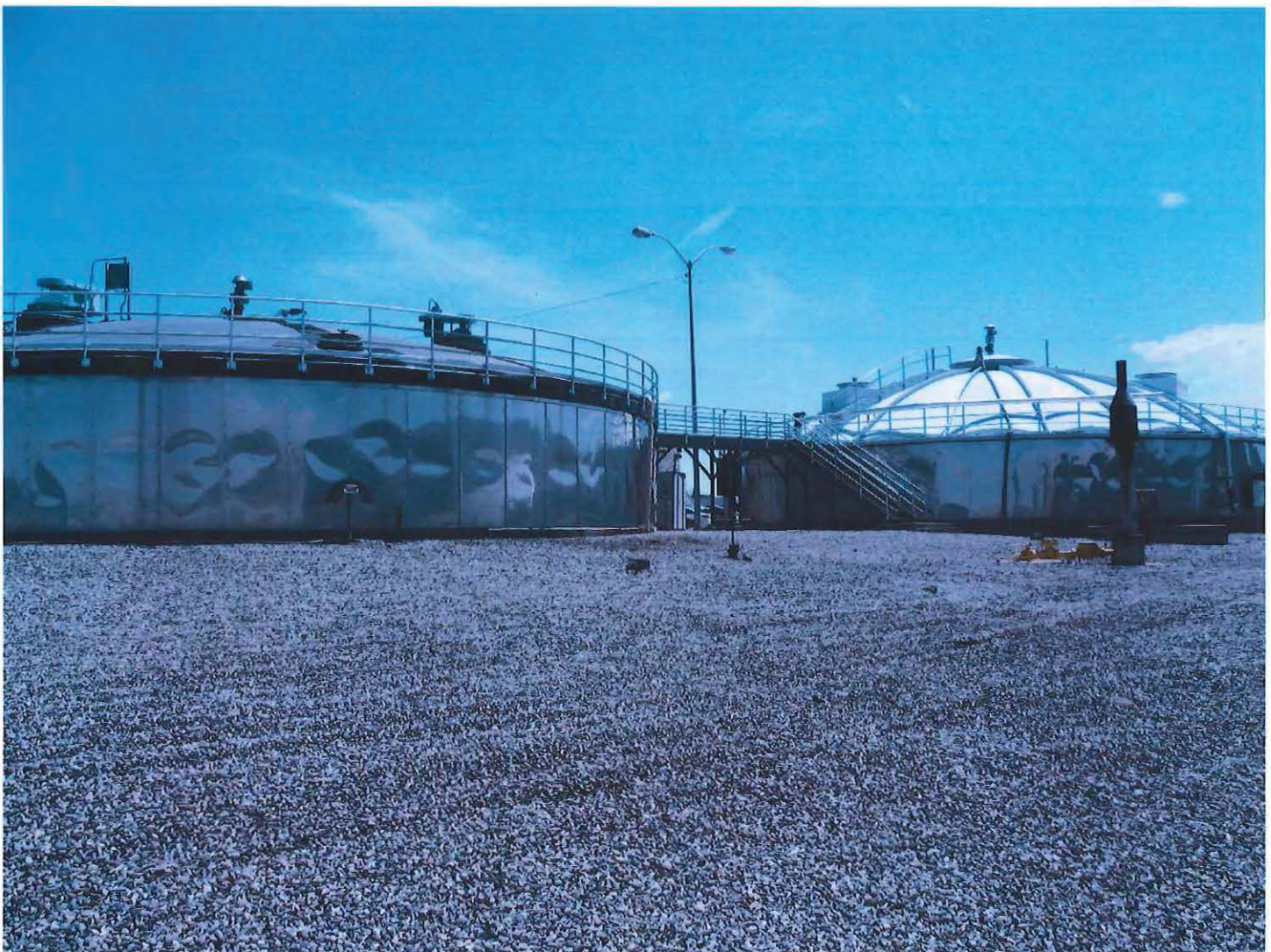
|                                                                                                          |                    |                   |
|----------------------------------------------------------------------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                                                                               | Date: June 8, 2016 | Time: 12:40 p.m.  |
| City/County: Farmington / San Juan                                                                       |                    | State: New Mexico |
| Location: City of Farmington WWTP                                                                        |                    |                   |
| Subject: Farmington WWTP Outfall to the San Juan River (Outfall submerged due to high flow in the river) |                    |                   |



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

### Official Photograph Log

|                                             |                    |                   |
|---------------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman                  | Date: June 8, 2016 | Time: 11:55 a.m.  |
| City/County: Farmington / San Juan          |                    | State: New Mexico |
| Location: City of Farmington WWTP           |                    |                   |
| Subject: Primary sludge digesters #1 and #2 |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                    |                    |                   |
|------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman         | Date: June 8, 2016 | Time: 11:56 a.m.  |
| City/County: Farmington / San Juan |                    | State: New Mexico |
| Location: City of Farmington WWTP  |                    |                   |
| Subject: Secondary sludge digester |                    |                   |



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**Official Photograph Log**

|                                    |                    |                   |
|------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman         | Date: June 8, 2016 | Time: 11:56 a.m.  |
| City/County: Farmington / San Juan |                    | State: New Mexico |
| Location: City of Farmington WWTP  |                    |                   |
| Subject: Sludge belt press         |                    |                   |



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Official Photograph Log

|                                    |                    |                   |
|------------------------------------|--------------------|-------------------|
| Photographer: Mike Tillman         | Date: June 8, 2016 | Time: 12:15 p.m.  |
| City/County: Farmington / San Juan |                    | State: New Mexico |
| Location: City of Farmington WWTP  |                    |                   |
| Subject: Sludge drying beds        |                    |                   |





## **Appendix 2. - Compliance Evaluation Inspection Sign-in Sheet**

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Farmington NM - CEI

6/8/16

Sign In Sheet

Time In: 8:55

Time Out: 4:15 / 4:45

| <u>Name</u>                     | <u>Title</u>           | <u>Att. Location</u> | <u>Phone</u> | <u>Email</u>            |
|---------------------------------|------------------------|----------------------|--------------|-------------------------|
| 1. Mike Tillman                 | Env. Sci.              | EPA-R6               | 214-665-7531 | tillman_michael@epa.gov |
| 2. David Long                   | Env. Sci.              | USEPA GEN-DM         | 214 665-7323 | long.david@epa.gov      |
| 3. Dean Roquemore               | Oper. Manager          | CH2M                 | 505-325-7027 | dean.roquemore@ch2m.com |
| 4. Ron Rosen                    | Proj Manager           | CH2M                 | 505-486-3511 | Ron.Rosen@ch2m.co       |
| 5. J. H. Snake                  | Water/Wastewater Admin | City                 | 505-599-1083 | JSnake@fntn.org         |
| 4:15 / 4:45<br>6. Ruben Salcido | W / WW Operations Mgrs | City                 | 505-599-1284 | rsalcido@fntn.org       |

7.

8.

9.

10.



## **Appendix 3. – Wastewater Treatment Plant Site Plan**



HEADWORKS - FIRST STAGE OF WASTEWATER TREATMENT WHERE NON-ORGANIC MATERIAL AND GRIT IS WASHED AND REMOVED FROM THE WASTEWATER.

PRIMARY CLARIFIER - PROCESS AFTER T HEADWORKS WHERE SETTLEABLE SOLID ARE REMOVED BY SEDIMENTATION.

MRAS BASIN - MEDIUM RATE ACTIVATED SLUDGE - THE BIOLOGICAL PROCESS WHERE MICROORGANISMS METABOLIZE AND BIOLOGICALLY FLOCCULATE THE ORGANICS IN WASTEWATER.

TRICKLING FILTER - FIXED-GROWTH BIOLOGICAL BEDS WHERE WASTEWATER SPREAD ON THE SURFACE OF MEDIA SUPPORTING MICROBIAL GROWTHS.

FINAL CLARIFIER - PROCESS AFTER BIOLOGICAL TREATMENT WHERE SETTLEABLE SOLIDS ARE REMOVED BY SEDIMENTATION.

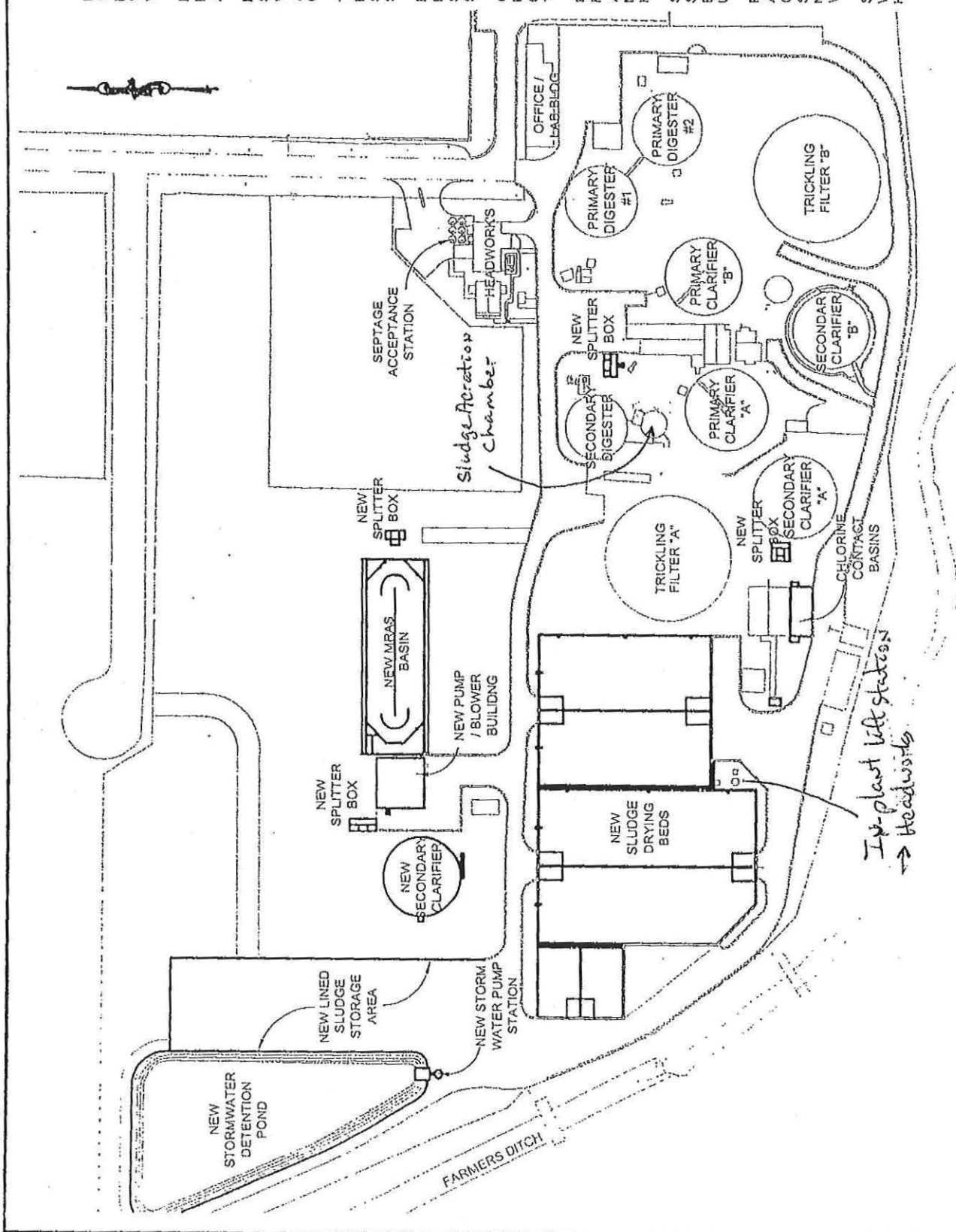
CHLORINE CONTACT BASIN - FINAL PROCESS. WATER IS DISINFECTED USING CHLORINE BEFORE IT IS DISCHARGED TO THE RIVER.

PUMP / BLOWER BUILDING - BUILDING HOUSES PUMPS AND BLOWERS FOR THE ACTIVATED SLUDGE PROCESS. THE MOTOR CONTROL CENTER IS ALSO HOUSED IN THE PUMP / BLOWER BUILDING.

SPLITTER BOX - FLOW CONTROL STRUCTURE WHICH SPLITS FLOWS BETWEEN BASINS. FLOW IS CONTROLLED USING SLIDE GATES.

PRIMARY & SECONDARY DIGESTION - ANAEROBIC SLUDGE DIGESTION WHERE ORGANICS ARE REMOVED PRIOR TO SLUDGE DISPOSAL. CARBON DIOXIDE METHANE GAS IS PRODUCED AND THEN WASTED.

SLUDGE DRYING BEDS - USED TO REMOVE WATER FROM DIGESTED SLUDGE PRIOR TO HAULING SLUDGE TO THE LANDFILL.





## **Appendix 4. - Example Plant Maintenance Work Order**



**ch2m****COMPLETED**

Work Order FAR-WWT-863885

Farmington Wastewater  
Printed 6/7/2016 - 8:55 AM**Maintenance Details**

Requested: 6/7/2016 12:09:27 AM

Procedure: OPERATIONS CLARIFIER INSPECTION AND  
CLEANING WEEKLY (FAR-CLAR-OPCLEAN-W)

Last PM: 6/31/2016

Target: 6/10/2016 (4) hrs  
Priority/Type: Normal / Operations  
Supervisor: Roquemore, Dean  
Shop: FAR-WASTEWATEROMI - Municipal West  
Farmington Project  
Farmington Wastewater  
Farmington Wastewater Treatment Plant  
WWTP Final Clarification Area  
MRAS Clarifier 01 (FAR-WWT-73104)

Reason: OPERATIONS CLARIFIER INSPECTION AND CLEANING WEEKLY

Contact:  
Phone:☐ Warranty ☐ Shutdown ☐ Lockout ☐ Attach ☐ Charge**Tasks**

| #            | Description                                                                                                                                                                                                                                                                                                                                 | Rating | Meas. | Initials | Failed                   | N/A                      | Complete                            |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|----------|--------------------------|--------------------------|-------------------------------------|
|              | Follow the CH2M HILL Energized Electrical Enterprise Standard Operating Procedure HSE-221                                                                                                                                                                                                                                                   |        |       |          |                          |                          |                                     |
| 10           | Possible safety hazards include: * Mechanical - moving parts * Bio hazard - Oil to skin contact. Wear all PPE. (hard hat, rubber gloves, safety glasses, steel toe shoes) * Slip/fall Keep hands free when climbing ladders. Use caution on wet floors and surfaces * Lifting grate and screen cover Keep back straight and lift with legs. |        |       |          | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11           |                                                                                                                                                                                                                                                                                                                                             |        |       |          | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Weekly Tasks |                                                                                                                                                                                                                                                                                                                                             |        |       |          |                          |                          |                                     |
| 30           | Hose off weirs and launders                                                                                                                                                                                                                                                                                                                 |        |       |          | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 40           | Check all draft tubes for proper flow                                                                                                                                                                                                                                                                                                       |        |       |          | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 50           | General inspection of entire unit, catwalk, railings, safety chains, lighting                                                                                                                                                                                                                                                               |        |       |          | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Labor**

|             |         |           |       |     |         |        |           |
|-------------|---------|-----------|-------|-----|---------|--------|-----------|
| Labor       | Account | Work Date | Start | End | Reg Hrs | OT Hrs | Other Hrs |
| A. Blackman |         | 6-7-16    |       |     | 4.0     |        |           |

**Parts/Tools**

| Barcode Item | Location | Account | Est Qty | Actual Qty |
|--------------|----------|---------|---------|------------|
|              |          |         |         |            |
|              |          |         |         |            |
|              |          |         |         |            |

**Labor Report**Completed: \_\_\_\_\_ Failure: \_\_\_\_\_  
Report: \_\_\_\_\_



**Appendix 5. –  
Email Communication with EPA Region 6 Houston Lab  
regarding TSS Pour Method**



**Tillman, Michael**

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**From:** Long, David  
**Sent:** Tuesday, June 14, 2016 12:40 PM  
**To:** Tillman, Michael  
**Subject:** FW: TSS Pour Method - Alternate Method Approval

**From:** Stockton, David  
**Sent:** Tuesday, June 14, 2016 10:41 AM  
**To:** Long, David <Long.David@epa.gov>  
**Subject:** RE: TSS Pour Method - Alternate Method Approval

David,

think I have only allowed this method deviation on TSS one time, probably was Farmington WWTP 2007. will still allow this method change if requested, and require the same compatibility test. If they are certified by an outside organization this may not be acceptably, I don't know. f the effluent is very low in particulate , as I would expect, the other technique is not realistic .It would require filtering a large amount of sample volume (1 to 2 liters) to fulfill the particulate weight requirement and would require an unrealistic amount of time. The EPA has not given a general national ATP approval for this modification as far as I know. Let me know if you have other questions.

David

**From:** Long, David  
**Sent:** Tuesday, June 14, 2016 8:40 AM  
**To:** Stockton, David <Stockton.David@epa.gov>  
**Subject:** TSS Pour Method - Alternate Method Approval

David,

Mike Tillman and I inspected the City of Farmington WWTP last week and noted that they had a 2007 email from you allowing them to use the EPA 160.2 pour method (beaker and graduated cylinder), in place of the Standard Method requirement to use a magnetic mixer and volumetric pipette. There was also a suggestion that they run comparative data and statistical analysis to show compatibility between the pour methods. Are you still allowing this alternate method if they have performed a comparability study? Also, has EPA released a general alternate method letter like they did for the Ammonia Analysis and volatile distillation procedure?

Thank you,

David Long  
Environmental Scientist  
USEPA 6EN-WM  
1445 Ross Avenue  
Dallas, Texas 75202  
(214) 665-7323

