

Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	11/09/2021 (updated 12/27/2021 and 2/07/ 2022)	
Media Program:	Water	
Regulatory Program(s)	CWA	
Company Name:	El Paso Water Utilities	
Facility Name:	John T. Hickerson WWTF - Frontera Lift Station	
Facility Physical Location:	701 Executive Center Boulevard	
(city, state, zip code)	El Paso, Texas	
Mailing address:	Post Office Box 511	
(city, state, zip code)	El Paso, Texas 79961-0511	
County/Parish:	El Paso	
Facility Phone Number	915-238-5050	
Facility Contact:	Ruben Rodriguez	Environmental Compliance Manager
	rrodriguez@epwater.org	
FRS Number:	110000503535	
Identification/Permit Number:	TX0087149	
Media Identifier Number:	NA	
NAICS:	221320	
SIC:	4952	
Personnel participating in inspection:		
R. Alan Shubert, PE	El Paso Water	VP-Operations & Technical Services
Felipe Lopez, PE	El Paso Water	COO-Distribution & Collection
Martin Noriega, PE, CFM	El Paso Water	COO-Support
Ruben Rodriguez	El Paso Water	Environmental Compliance Manager
Lisa Franklin Rosendorf	El Paso Water	Chief Communications & Government Affairs Officer
David Ramirez	TCEQ	Area Director
Kent Waggoner	TCEQ	Section Manager
Marisela Montelongo	TCEQ	Environmental Investigator
Veronica Guerrero	TCEQ	Environmental Investigator
Wayne Belzer	US International Boundary & Water Commission	Water Quality and Wastewater Systems
Susan Lucas Kamat	NMED	Program Manager-Point Source Regulation Section
Davena Crosley	NMED	Project Officer-Watershed Protection Section
David Esparza, P.E.	USEPA/R6-ECDWM	Environmental Engineer
EPA Lead Inspector Signature/Date		
	David Esparza	Date
Supervisor Signature/Date		
	Roberto Bernier	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector David Esparza, P.E., along with Susan Lucas-Kamat, Program Manager - Point Source Regulation Section - and Davena Crosley, Project Officer - Watershed Protection Section – of the New Mexico Environment Department (NMED) arrived at the El Paso Water Utilities (EPW) - Frontera Lift Station, located at 4131 Doniphan, at approximately 9:00 AM on November 9, 2021, for an announced inspection with regards to a failure of a force main resulting in a continuous sanitary sewer overflow (SSO) event.

We met with R. Alan Shubert, PE, VP-Operations & Technical Services, Felipe Lopez, PE, COO-Distribution & Collection, Martin Noriega, PE, CFM, COO-Support, Ruben Rodriguez, Environmental Compliance Manager, Lisa Franklin Rosendorf, Chief Communications & Government Affairs Officer all of EPW, and David Ramirez, Area Director, Kent Waggoner, Section Manager, Marisela Montelongo, Environmental Investigator, Veronica Guerrero, Environmental Investigator, all of the Texas Commission on Environmental Quality (TCEQ), as well as Wayne Belzer, Water Quality and Wastewater Systems, US International Boundary & Water Commission (IBWC).

I presented my credentials and informed the group that this was an EPA inspection to determine compliance under the Clean Water Act (CWA). This inspection was conducted under the authority of the National Pollutant Discharge Elimination System (NPDES) permit program, in accordance with the CWA. The generation of this report is based on information supplied by EPW representatives, observations made by the EPA inspector, and records and reports maintained by the permittee (El Paso Water) and the EPA. Before leaving the facility, an exit briefing was held with Mr. Shubert, the above-mentioned staff, and regulatory representatives, to explain areas of concern noted at the time of the inspection.

FACILITY/SITUATION DESCRIPTION

The dual 30-inch force mains of the Frontera Lift Station, the largest on the westside of El Paso, convey approximately 10 MGD of wastewater through closed conduits for 3.5 miles to the John T. Hickerson Wastewater Treatment Facility (WWTF) (Permit # TX0087149). After a March 2020 rupture in one of the conduits caused the EPW Public Service Board (PSB) to declare an emergency, EPW started a two-year replacement project of the wastewater mains after a condition assessment revealed significant corrosion. Replacement of the corroded segments were scheduled in fiscal year 2020/2021.

In August 2021, the City of EL Paso experienced a considerable rain event and then suffered multiple breaks to the force mains resulting in backups in surrounding low-lying neighborhoods. This compelled EPW to divert wastewater to the Rio Grande, while simultaneously declaring an emergency and begin manufacturing (on site) new pipe and joints and replacing a large segment of the force main immediately.

In late September, EPW implemented its first (of two) phases of a discharge mitigation plan by diverting wastewater, through irrigation canals, to the Roberto R. Bustamante WWTF (Permit # TX0101605) for treatment.

In late October 2021, EPW commenced a second phase of its mitigation plan to divert wastewater away from the Rio Grande River, through a closed conduit pipeline, to the Haskell R. Street WWTF (Permit #

TX0026751).

At the time of the inspection, EPW continued to release approximately 9.5-10 MGD of raw wastewater (based on estimates from EPW and TCEQ) to the Rio Grande River, at the same time both phases of mitigation and onsite manufacturing of new pipe, was ongoing.

Section II - OBSERVATIONS

I observed the following and the following information was provided and/or stated:

- Frontera Lift Station- experienced collection line failure on August 13, 2021. It was stated EPW was proceeding with a forensic analysis to determine the cause of the failure (Appendix 1 Photograph #1). Repairs also required dewatering for construction as the static water level (SWL) was stated to be at 15-feet below land surface (BLS) (Appendix 1 Photograph #2). Note: The size and transition of the various collection lines are represented in Appendix 2 Frontera Force Mains.
- The SSO event required temporary tie-in and routing of above ground piping to discharge into a stormwater drop inlet (Appendix 1 Photograph #3, Photograph #4, and Photograph #5). Prior to this in-place by-pass piping, earthen berms were constructed to contain the wastewater that flowed overland into the same inlet (Appendix 1 Photograph #6, Photograph #7).
- Doniphan Park Circle failure (August 13- August 21)- SSO flowing to Southwest inlet; thence into an adjacent retention pond. (Appendix 1 Photograph #8, and Photograph #9). Note: the retention pond in Photograph #8 equates to approximately 26K-ft² in surface area. It appeared restoration efforts had been attempted, though SSO debris, and visible staining, remained (Appendix 1 Photograph #10, Photograph #11).
- Staff of EPW stated they had experienced the impacts of the supply chain shortage, and delayed shipment of materials, while their contractor commenced manufacturing pipe fittings, conducting quality assurance monitoring, and preparing to connect the new pipeline at the lift station.
- An open excavation exhibited the existing dual 30-inch conduits (Appendix 1 Photograph #12). It was stated the existing lines were to be abandoned. These conduits were intended to act independently from one another and utilize an isolation valve. However, the isolation valve also failed. The new alignment (Appendix 1 Photograph #13) was to utilize an existing abandoned 54-inch water line as a sleeve to hasten replacement (using a slip line method).
- Observation of SSO flow into the Rio Grande near the Rio Grande Power Station (3501 Doniphan Drive) (Appendix 1 Photograph #15, and Photograph #16). Note: this structure is in Sunland Park, New Mexico, though the outfall to the Rio Grande is in Texas. The SSO flows traverse into the Rio Grande and downstream past the Courchesne Bridge (approximately 800-feet) (Appendix 1 Photograph #17, Photograph #18, and Photograph #19).
- A portion of the SSO flow is diverted from the Rio Grande into the concrete lined American Canal at the American Dam (approximately 1.5-miles downstream from the Rio Grande entry point (Appendix 1 Photograph #20) for treatment at the Hickerson WWTP.

- The SSO flow was being diverted from the Riverside Canal via pumps at approximately 7MGD into two (2) closed conduits; thence into 2 manholes that flow into the Bustamante WWTP for treatment (approximately 20-miles downstream) (Appendix 1 Photograph #21, Photograph #22) and discharge at the outfall (Appendix 1 Photograph #23). El Paso constructed an earthen berm within the Riverside Canal to expedite the effectiveness of the pumping equipment (Appendix 1 Photograph #24).

Section III – AREAS OF CONCERN

I observed the following Areas of Concern (AOC):

- No signage or public notifications were posted near the Frontera Lift Station SSO, inclusive of the by-pass conduits or bermed areas of open manways.
- Doniphan Park Circle failure (August 13- August 21) -No signage or public notice was posted near Doniphan Park Circle or at the low-lying impoundments that exhibited significant SSO debris and staining. Additionally, the adjacent wire fabric perimeter fencing was undermined or washed out.
- When asked about a valve exercising program (to practice isolating the dual 30-inch force mains) within the operations and maintenance program for the collection system, Mr. Shubert of EPW stated no valve exercising program existed.
- Observation of SSO flow into Rio Grande near the vicinity of the Rio Grande Power Station (3501 Doniphan Drive). (Appendix 1 Photograph #15 and Photograph #16). Note: this power station structure is in Sunland Park, New Mexico, though the outfall is in Texas. The SSO flows traverse into the Rio Grande and downstream past the Courcesne Bridge (approximately 800-feet) (Appendix 1 Photograph #17, Photograph #18, and Photograph #19); thus, potentially impacting the State of Texas, New Mexico, and Republic of Mexico.
- “As-Built” drawings are not yet available. Refer to discussion in Follow-up Item #2 below.

EPA Region 6 inspector David Esparza conducted a closing conference with El Paso Water Utilities TCEQ, IBWC and NMED personnel on November 9, 2021, for the inspection.

Section IV – FOLLOW UP

The following information was received by EPA on February 7, 2022, after the inspection on November 9, 2021, and review of items submitted for the Information Request needed to finalize this report. Note: The information/clarification request is in bold:

- EPW PSB, pursuant to an Information request under Section 308 of the Clean Water Act (CWA), 33 U.S.C. Section 1318 et seq, provided portions of requested information on December 23, 2021. Final submission of information was submitted on January 27, 2022, after an extension was granted by EPA.

- The new mains are made of fiberglass, a non-corrosive material; thus, negating the typical need for cathodic protection, but now necessitating clear and accurate “as-built drawings” with respect to alignment and location or line locating tape.

- **1. Frontera Force Main (FFM) Collection System Schematic Info (pdf)- a “line” type drawing with identifying colors delineating the transition from the stated 30-inch to 36-inch to 42-inch from the beginning of project (BOP) (Sta 0+00) to end of project (EOP), with Station point noted**

(Appendix 2 Frontera Force Mains).

- **2. The received drawings (Plan Set) indicate a date of March 12, 2021. Which is prior to the August 2021 Sanitary Sewer Overflow (SSO) event. Can you confirm if this Plan Set is what was used for construction or does an “as built” set exist?**

Yes, I confirm, the drawing set sealed March 2021 is the same plan set used to construct the replacement pipeline, we are referring to as Phase 1. An As-Built set is still not available as the contractor and our field inspector and owner’s representative are consolidating all field changes and notes and are still in the process of creating the As-Built set. I expect this as-built set to be available in March 2022.

- **3. Can you confirm if the installation of the contractor manufactured piping and/or fittings is permanent or temporary?**

- The installation of the on-site manufactured fittings and pipes are permanent. Thompson Pipe Group provided a submittal for their field procedures to complete these fittings and pipes. Thompson Pipe Group trained personnel performed all the field laminations. All materials and resins were the same as the approved pipe, as manufactured in their shop. The approved pipe is Fiberglass-Reinforced Polymer Mortar Pressure Pipe manufactured and installed according to:

- A. ASTM D3754 – Standard Specification for “Fiberglass” (Glass-Fiber Reinforced Thermosetting-Resin) Sewer and Industrial Pressure Pipe
- B. ASTM D4161 – Standard Specification for “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals
- C. ASTM D2412 – Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
- D. ASTM D3681 – Standard Test Method for Chemical Resistance of “Fiberglass” (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe in a Deflected Condition
- E. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

- **4. Clarification how the existing dual force main in the vicinity of Doniphan Park Circle (Plan Sheet C09) will be abandoned.**

Existing pipelines abandoned in place were done so according to the construction detail below (From drawing set sheet CD07). In Summary, sandbags and wood forms are used to construct a plug using a low strength cement-based material (generically known in the industry as either “flowable fill” or “2-sack” or “controlled low strength material”)

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 26 photos taken 11/09/2021

Appendix 2- Frontera Force Mains

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



Previously existing collection lines staged in proximity of Frontera Lift Station awaiting forensic analysis. (DSCN2003) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of dewatered excavation with new collection line stub outs in-place. Note: these new dual collection lines are approximately 30-inch diameter. (DSCN2001) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of temporary above ground piping. (DSCN1998). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



Additional view of above ground temporary piping. Note: the lift station, is in the approximate center left of the photograph. (DSCN2006) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of the temporary above ground piping (left side of photograph) and stormwater drop inlet. (DSCN2007). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of earthen berms constructed to contain wastewater flows, prior to placement of temporary above ground piping. Note: the lift station is in the approximate lower right of the photograph. (DSCN2002). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of the constructed earthen berm and above ground temporary by-pass piping in foreground. Note: concrete barriers typically placed to prevent wash-out. (DSCN2005). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of retention pond located along the approximate southeast side of Doniphan Park Circle. (DSCN2010). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of the wash-out and undermining of wire fabric fencing. Note: retention pond in previous photograph is located at the right side of this photograph (DSCN2013). Photographed by D Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of stressed vegetation located along east side of wire fabric fencing and north of retention pond described in previous photograph. (DSCN2016) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



Additional view of earthen ditch along east side of wire fabric fencing. Note: stressed vegetation, staining and SSO debris. (DSCN2018) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of existing dual 30-inch collection lines. Note: it was stated these dual lines are to be abandoned. (DSCN2020). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of open excavation in the vicinity of the new alignment utilizing an existing abandoned 54-inch water line and a "slip line method" of placement to hasten replacement. (DSCN2024). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 14

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of the Sunland Park Lift Station located west of the Doniphan Park Circle dual 30-inch force main failure. (DSCN2025). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 15

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of SSO flow into Rio Grande in the vicinity of the Rio Grande Power Station (3501 Doniphan Drive). (DSCN2030). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 16

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of SSO flow into Rio Grande at outfall. Note: SSO debris in approximate center of photograph. (DSCN2032) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 17

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of SSO flows within the Rio Grande standing along the west side. Note: visible growth of algal blooms and pungent aromatics. The Courchesne Bridge is located approximately 800-feet south of the outfall. (DSCN2046) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 18

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View beneath the Courchesne Bridge looking towards the approximate north. (DSCN2048)
Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 19

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of Rio Grande from the approximate southside of the Courchesne Bridge. Note: the visible ponding, staining, and stressed vegetation. (DSCN2049) Photographed by D. Esparza

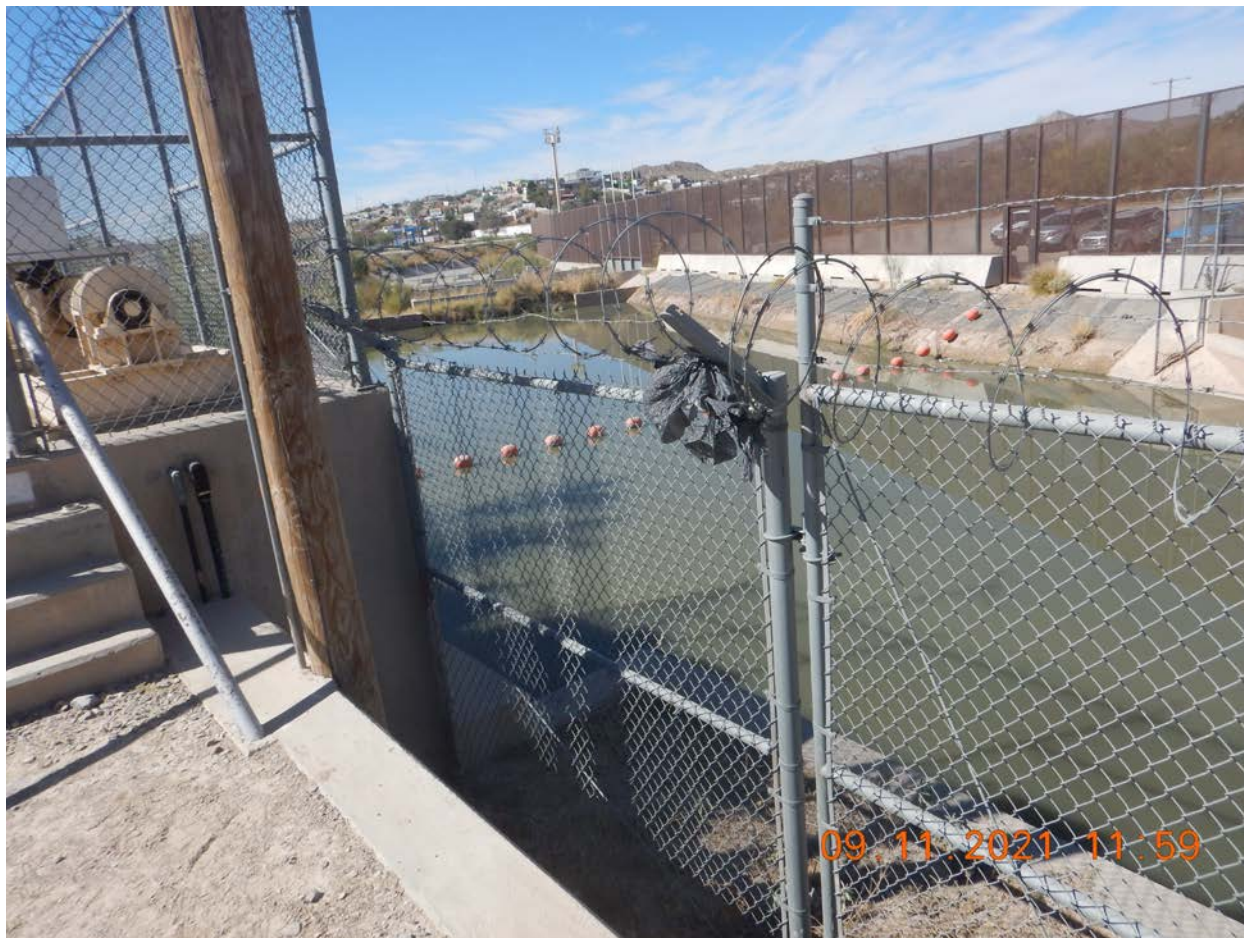


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 20

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of SSO flow within the American Canal at the American Dam. Note: this location is approximately 1.5-miles downstream of the SSO flow entry point into the Rio Grande. (DSCN2056) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 21

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of temporary pumps within the Riverside Canal extracting SSO flow for treatment at the Roberto Bustamante WWTP. Note: these two (2) mobile pumps are operating at approximately 7MGD and are located some 20-miles downstream. (DSCN2062) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 22

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of temporary above ground by-pass piping used in conjunction with mobile pumps in previous Photograph #21. This piping discharges into two (2) manholes that flow into the Roberto Bustamante WWTP for treatment. (DSCN2064). Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 23

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of outfall from the Roberto Bustamante WWTP. (DSCN2063) Photographed by D. Esparza



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 24

Location: John T. Hickerson WWTF-Frontera Lift Station Break		
City: El Paso	County/Parish: El Paso	State: Texas



View of earthen berm constructed by El Paso Water within the Riverside Canal to expediate the effectiveness of the pumping equipment. The Roberto Bustamante WWTP outfall is in the approximate center left of the photograph. (DSCN2060). Photographed by D. Esparza

Appendix 2

Frontera Force Mains

Frontera Force Mains and Sunland Park Lift Station

