

California Regional Water Quality Control Board, Colorado River Basin  
Prosecution Team Evidence  
on the matter of  
Administrative Civil Liability Complaint R7-2014-0041  
Exhibit 34



## City of Brawley and National Beef

### Timeline of Wastewater Discussions

#### May 2012 to September 2012

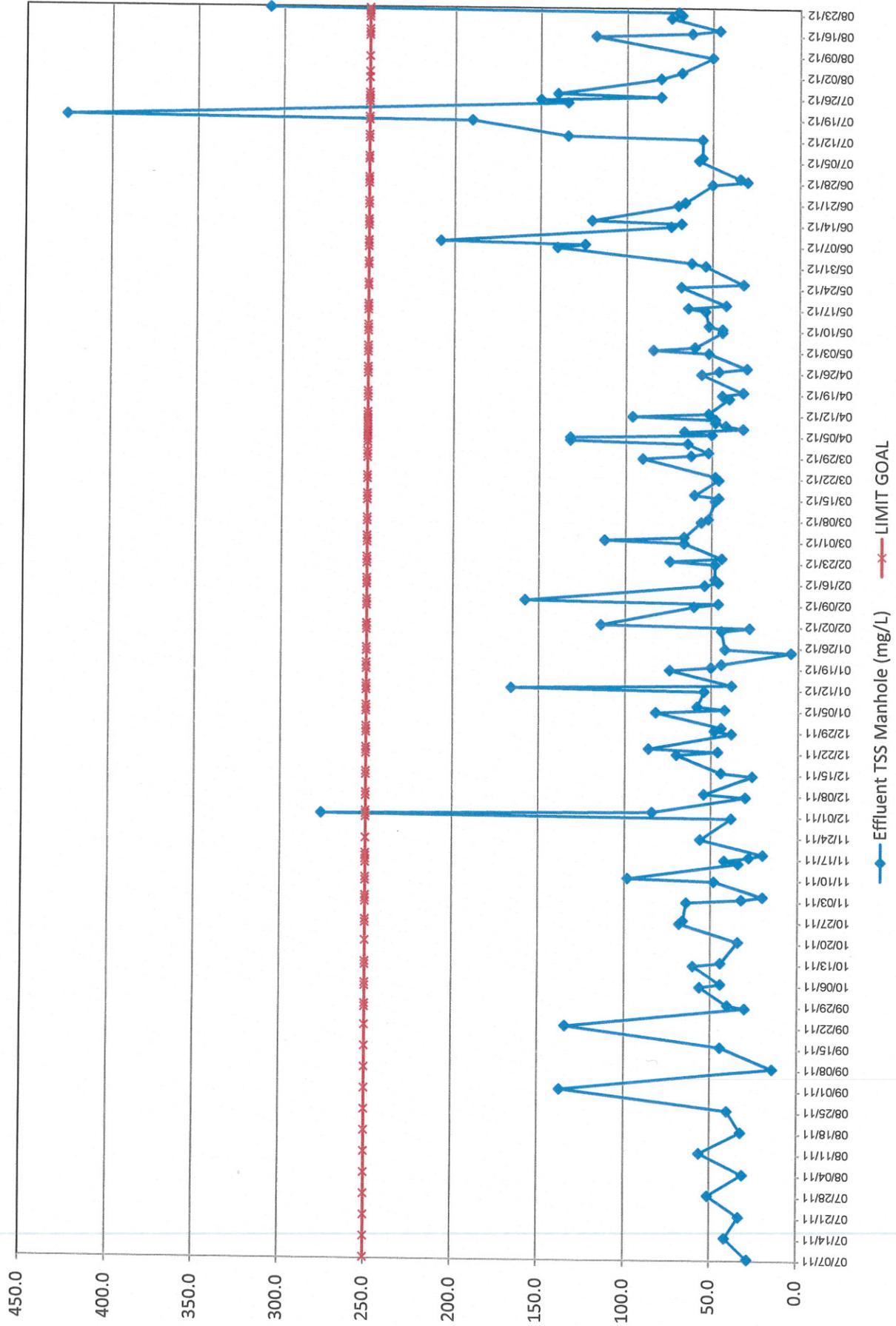
- Early May 2012 – NB began to see an increase in ammonia concentrations being discharged to the City dating back to late April 2012; began internal discussions centered on increasing Dissolved Oxygen (DO) in Pond 2
- May 9, 2012 – City POTW Open House
- Late May 2012 – NB discussions with Heron Innovators consulting group about improvements and additional aeration to NB wastewater treatment system
- June 4, 2012 – NB discovered that a thick grease cap had developed on the surface of Pond 2; discussed dealing with the cap with ChemTreat (water treatment vendor).
- June 7, 2012 – met with City to inform them of the grease cap and intentions of dealing with the cap; discussed Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) as a solution – letter from the City followed the meeting, expressing concerns with H<sub>2</sub>O<sub>2</sub>; NB decided to use enzyme instead with some success; City first mentioned concerns about low DO at their WWTP during the meeting after the original meeting had adjourned an NB was called and asked to return to the City office
- June 15, 2012 – minor wastewater spill outside of manhole; City reported to Regional Board; spill was cleaned up with less than a 5-gallon bucket of accumulated material and area was sanitized
- June 19, 2012 – City requested a meeting with NB to discuss trends they were seeing on their SCADA system, particularly relating to low DO
- June 22, 2012 – Conference call with City instead of on-site meeting; discussed COD concentrations and flow rates; City followed up with a letter regarding the meeting
- June 26, 2012 – City and several NB representatives met at the City WWTP to discuss City WWTP operations; toured the facility

- June 27, 2012 – meeting with City team and NB team to primarily discuss low DO; City presented several documents regarding discharge violations (mainly ammonia); NB agreed to reduce flow to 1,200 gpm to the City; a letter from the City followed the meeting
- Late June 2012 – NB began receiving COD results from City; NB developed plan to increase COD testing on site and reviewing results; NB began analyzing COD in early July
- July 5, 2012 – NB provided a letter to the City outlining an Action Plan of improvements that would be made to the NB wastewater treatment plant; also addressed cost sharing opportunities for increased costs incurred by the City for operating their plant
- July 6, 2012 – NB received a response letter from the City regarding the July 5, 2012 letter from NB
- July 9, 2012 – NB received letter from City regarding upset conditions at the Brawley WWTP that were caused by increases in National Beef flow
- July 17, 2012 – NB and City met to provide updates since the previous meeting; NB provided plans for upgrades to the NB wastewater treatment plant; meeting included design engineers from both teams
- July 17-18, 2012 – another thick grease cap developed on the surface of Pond 2 caused by grease migrating from Pond 1; NB began discussions for troubleshooting and investigating the real cause of the grease migrations; part of the plan eventually led to the decision to remove a portion of the tarp on Pond 1 to see if there was any infrastructure damage, etc.
- July 23, 2012 – NB received a letter from the City again discussing flows and asking NB to stop using enzymes to remove grease cap
- July 26, 2012 – NB met with City and provided a list of 8 construction activities including the opening of the tarp on Pond 1; City letter following meeting expressed concerns about this activity
- July 27, 2012 – NB met with City officials to discuss the plan for opening the tarp and the safety plan that would be followed. City officials appeared to be OK with the plan
- Late July into early August – NB began investigation of the cause of the grease migrations from Pond 1 into Pond 2; a portion of the Pond 1 tarp was cut back; the infrastructure showed no signs of damage; excavation of material from the area showed a large buildup of grease at the West end of Pond 1, near the discharge line from Pond 1 leading to Pond 2; NB pursued alternative means of discharging water (by pump) from

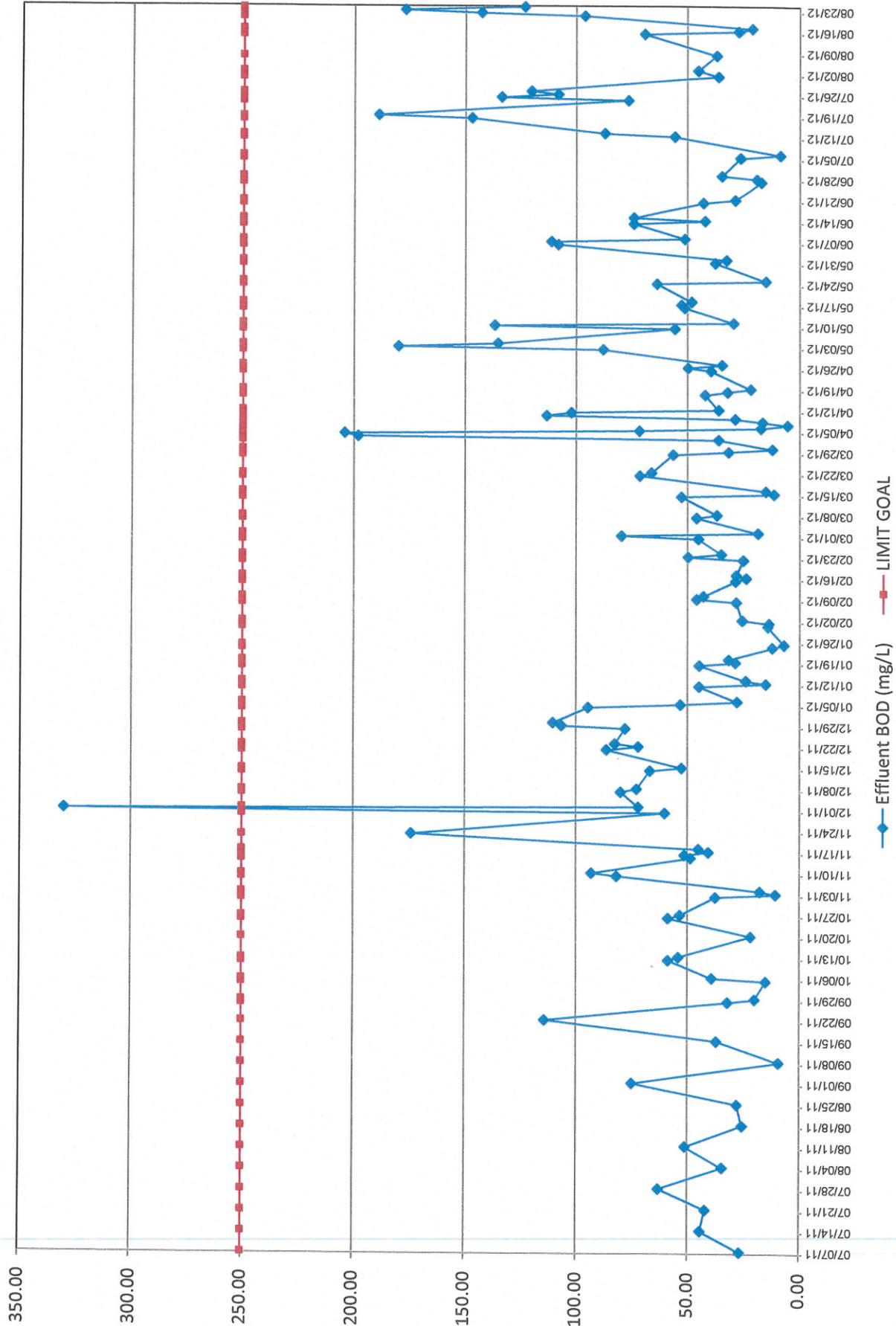
Pond 1 to Pond 2 to stay away from the grease buildup near the original gravity discharge; a new line was installed in the South berm of Pond 1 near the West end of the pond using a boring system; water is now discharged from Pond 1 to Pond 2 utilizing a pump at the new discharge location; during this period a recirculation line was added to Pond 2 with some additional aeration added in the recirculation system; plans were also made to install permanent bottom diffusers to Pond 2 to increase DO and help with ammonia removal; sodium nitrate was also added to the recirculation line to increase DO; anti-foam was also applied to break up the grease that accumulated on Pond 2; an odor abatement system was also installed to reduce odor potentials; the City was kept abreast of these activities through the various meetings and conversations

- Early August, 2012 – NB initiated the use of a monitoring system provided by Chem-Treat to better regulate Total Suspended Solids discharges to the City.
- August 8, 2012 – NB and City met to discuss updates and share information; a follow-up letter to that meeting was provided
- August 29, 2012 – NB met with City and provided updates on construction projects
- September 4-5, 2012 – NB installed DAF between Ponds 1 and 2 to remove grease before it was discharged to Pond 2; also continued to pursue plans for permanent aeration in Pond 2 and dredging Pond 3
- September 6, 2012 – NB met with City to discuss project updates and provide some test result information
- September 7, 2012 – NB received letter from City as follow-up to August 29 and September 6 meetings
- Mid-September 2012 – NB continued to pursue WWTP improvements including additional aeration in Pond 2, dredging Pond 3, and locating a consulting firm to assist with design considerations in Pond 3 once the dredging is complete
- September 21, 2012 – NB and City met to discuss improvements; City reported that DO at their plant was fairly consistent, lower COD from National Beef, and agreement on some meter readings
- September 21-22, 2012 – two bottom-diffuser aerator chains were installed in Pond 2 to provide additional aeration
- September 25, 2012 – NB meeting with Regional Water Quality Control Board representatives at the NB plant in Brawley

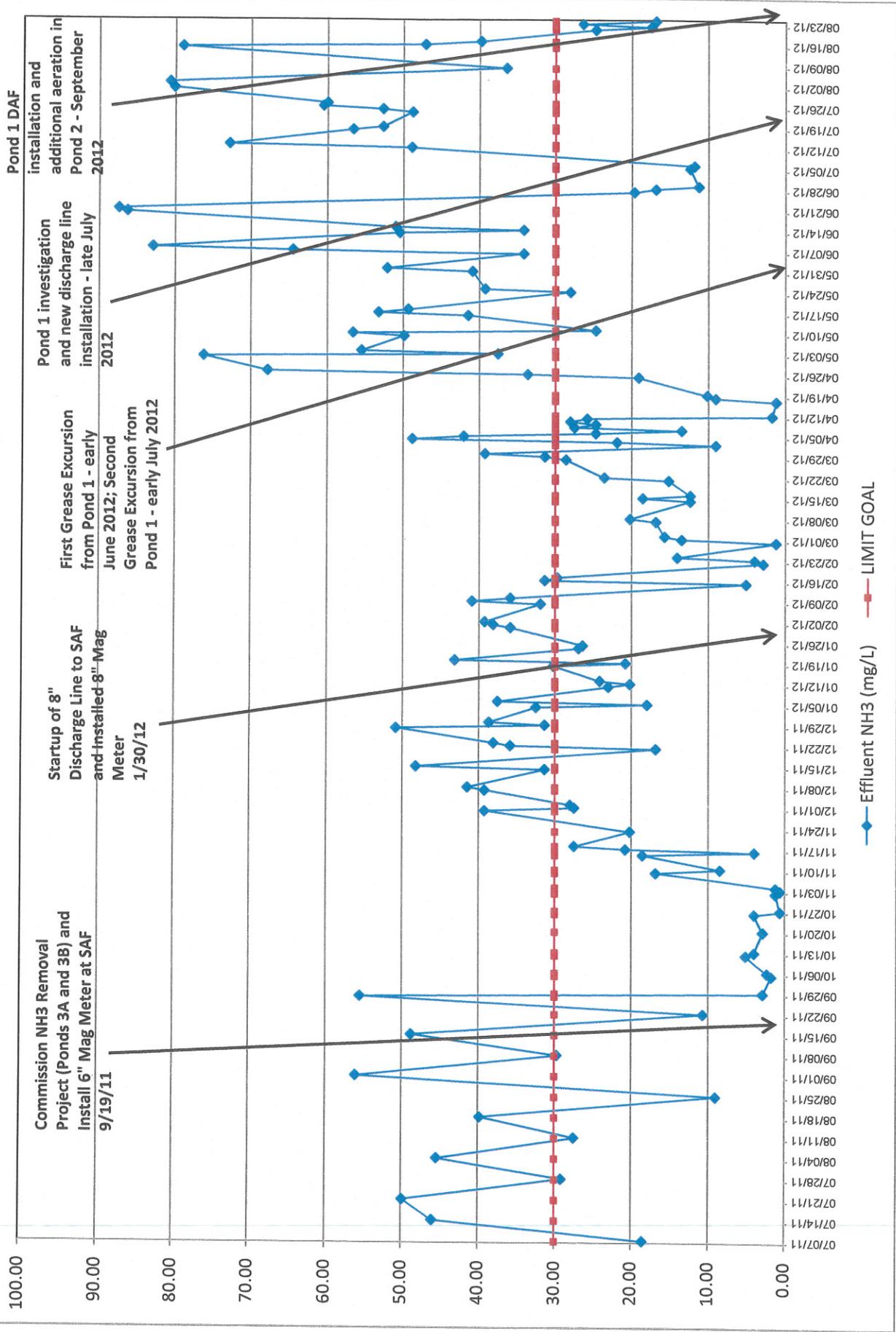
# July 2011 to August 2012 Effluent TSS Manhole (mg/L)



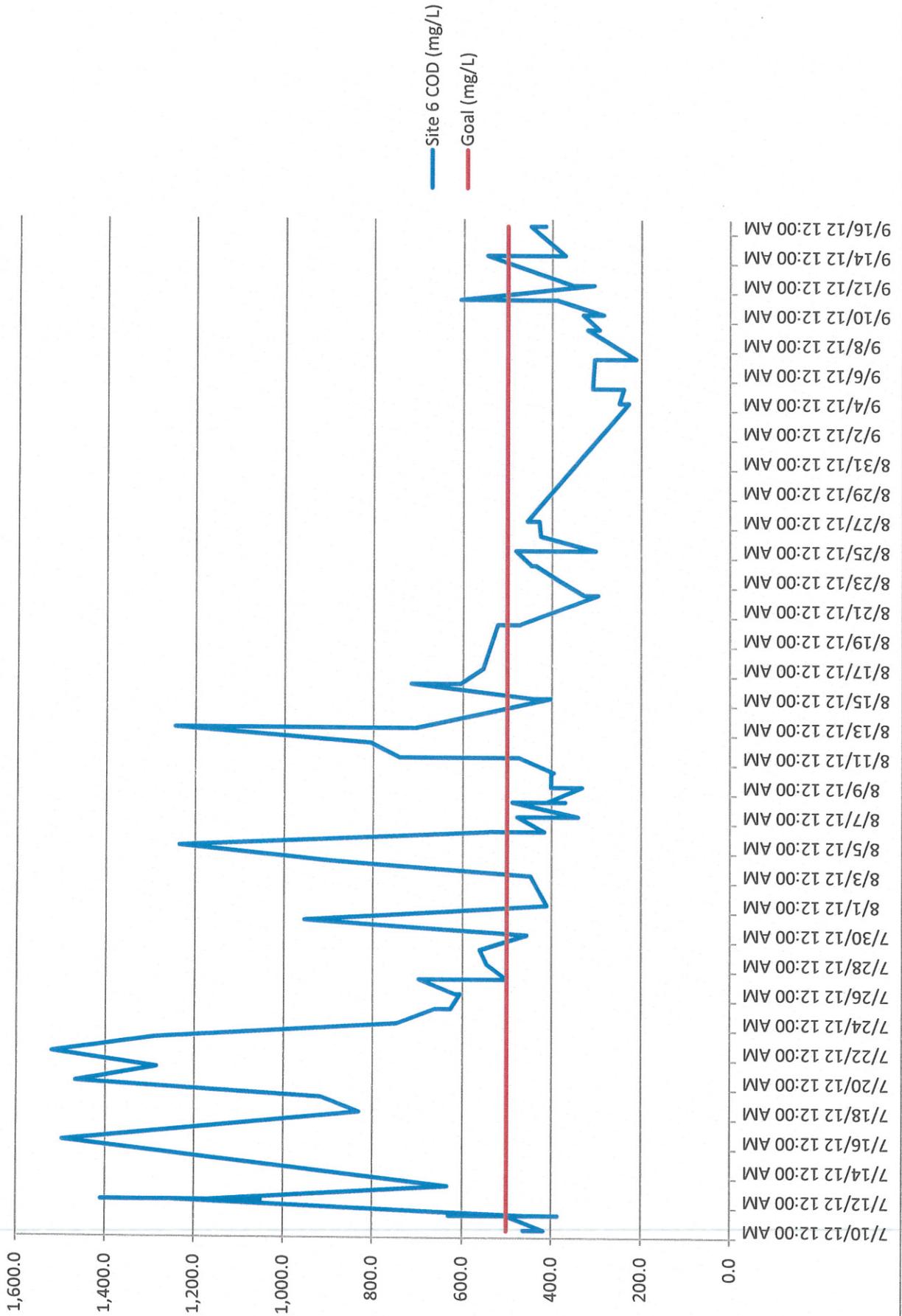
# July 2011 to August 2012 Effluent BOD (mg/L)



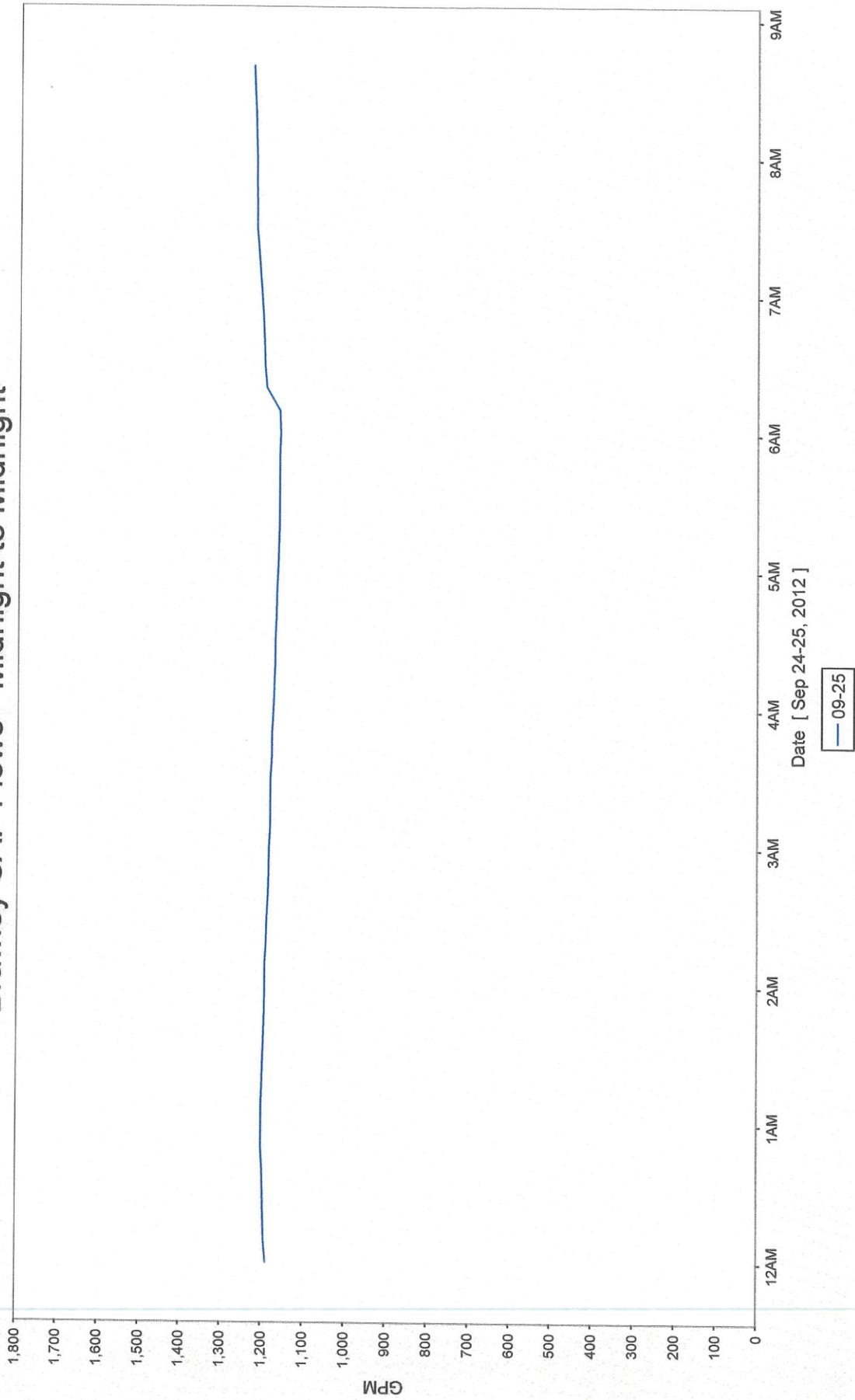
# July 2011 to August 2012 Effluent NH<sub>3</sub> (mg/L)



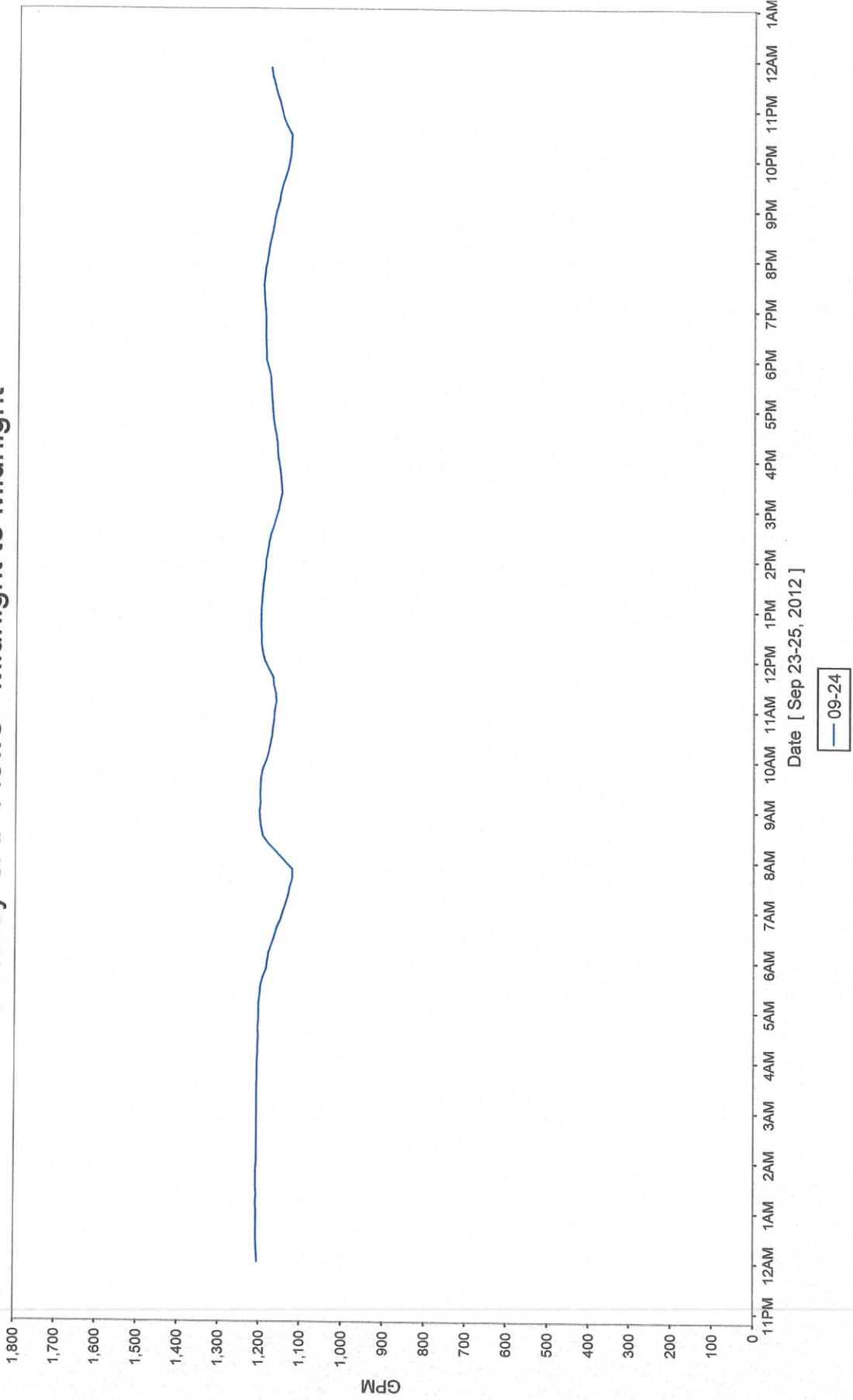
# National Beef California, LP - COD from Site 6



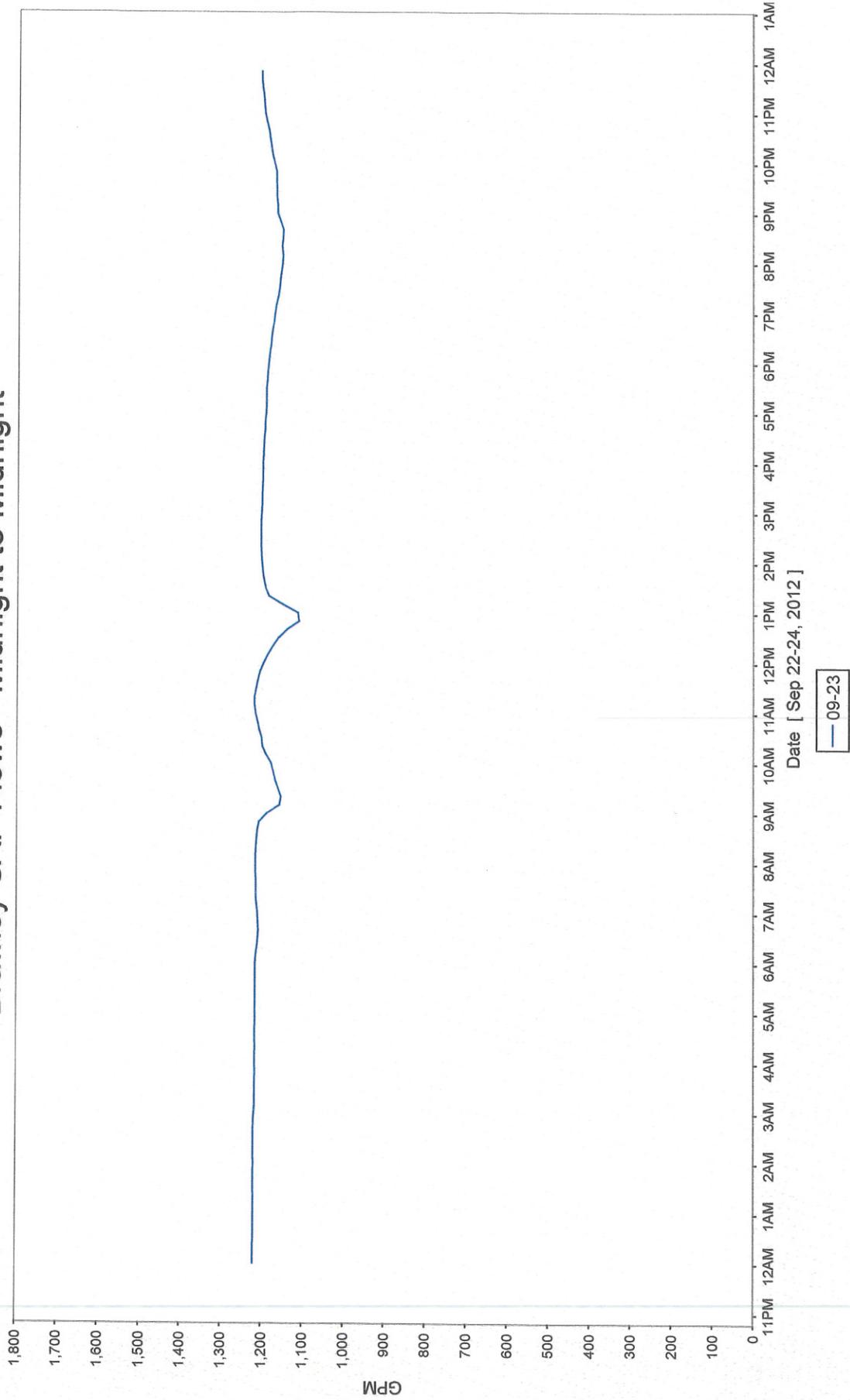
# Brawley SAF Flows - Midnight to Midnight



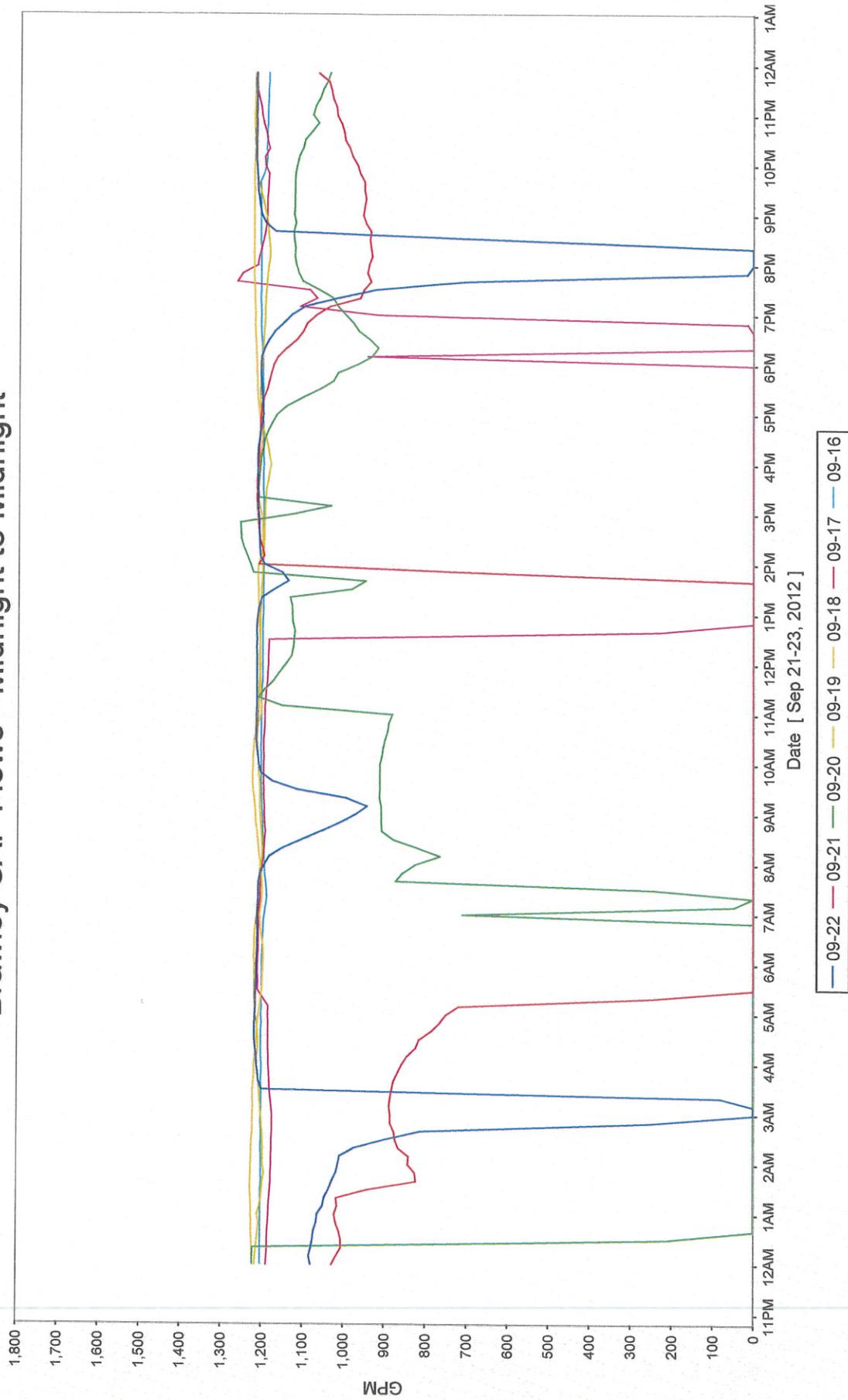
# Brawley SAF Flows - Midnight to Midnight



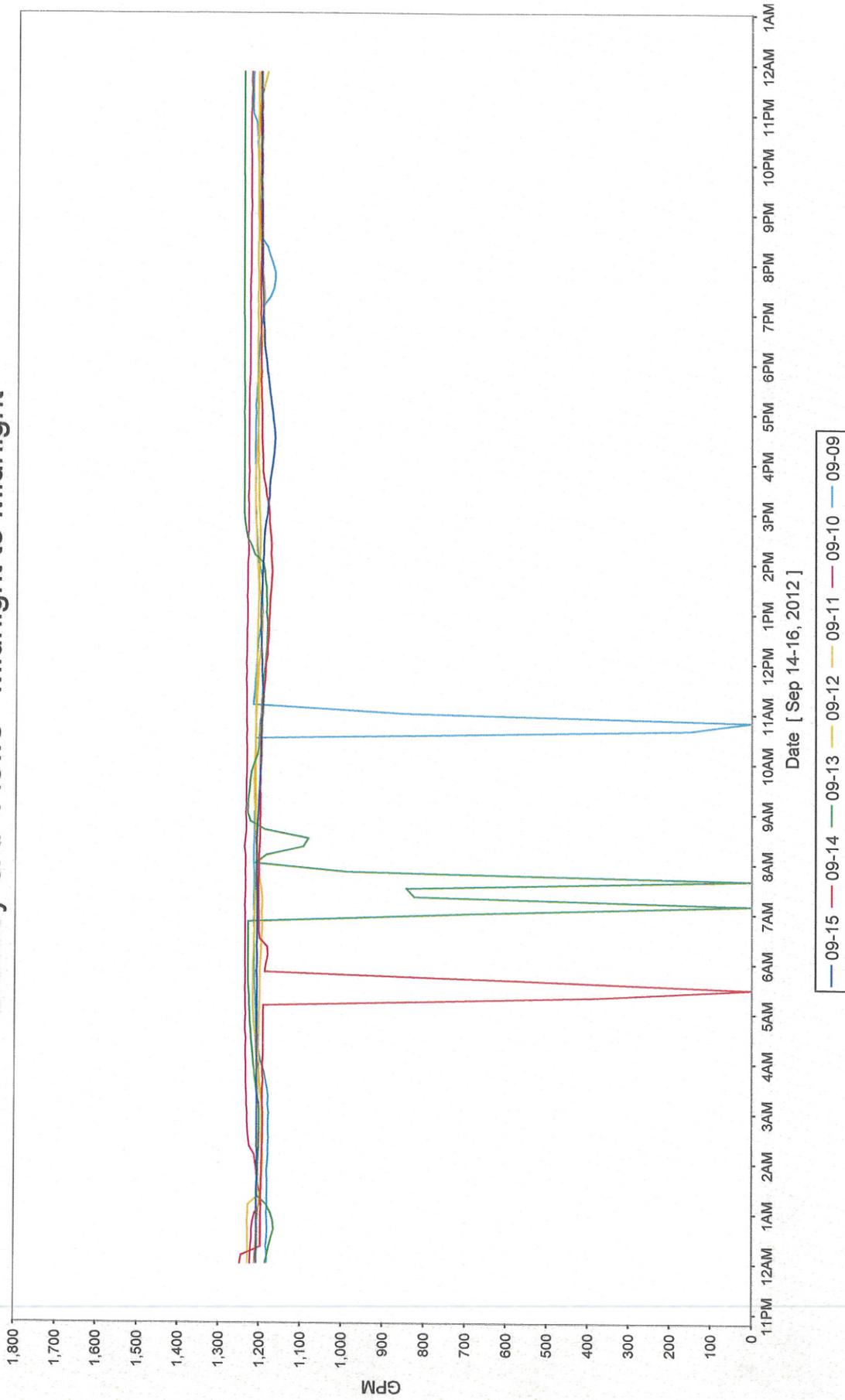
# Brawley SAF Flows - Midnight to Midnight



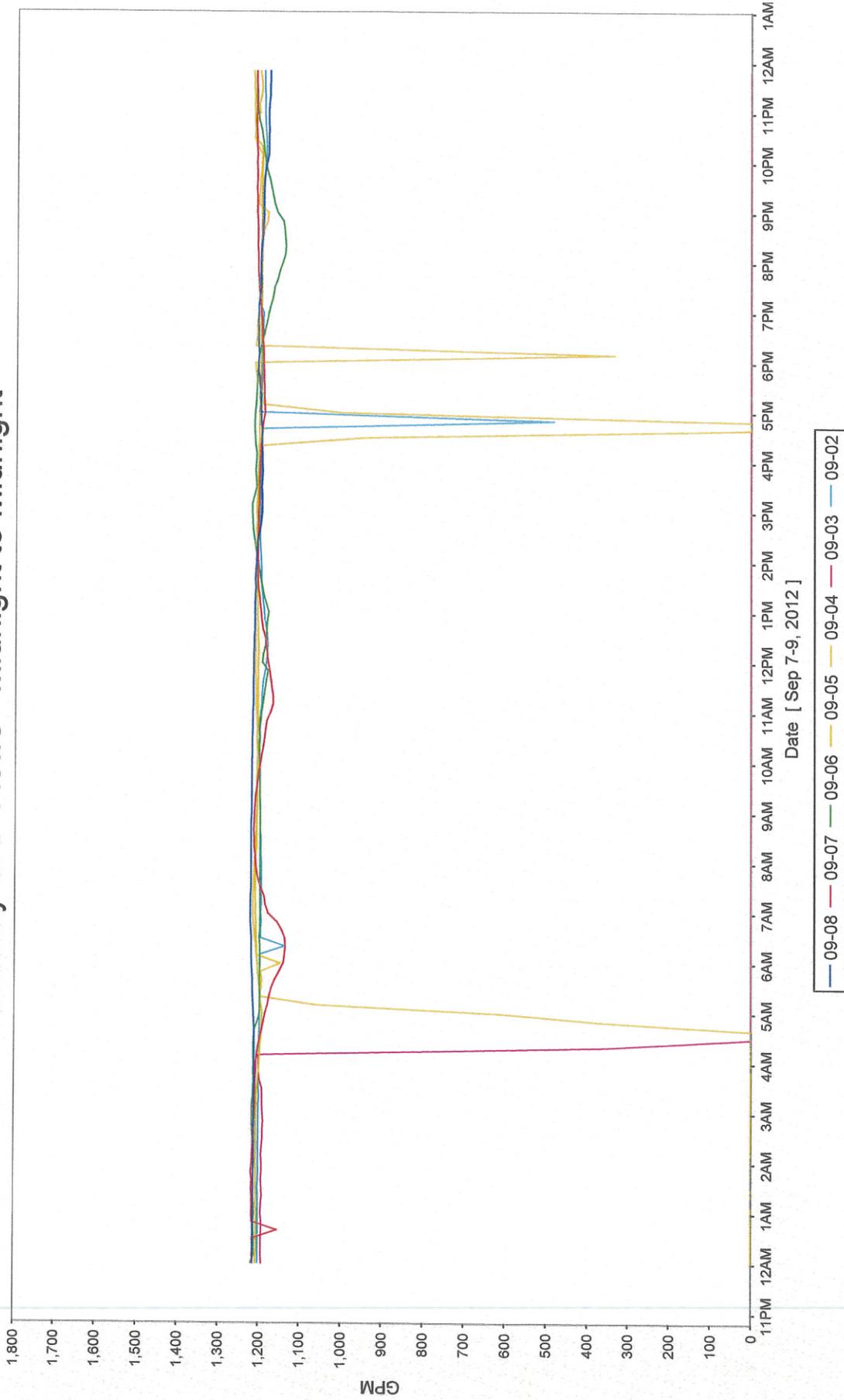
# Brawley SAF Flows - Midnight to Midnight



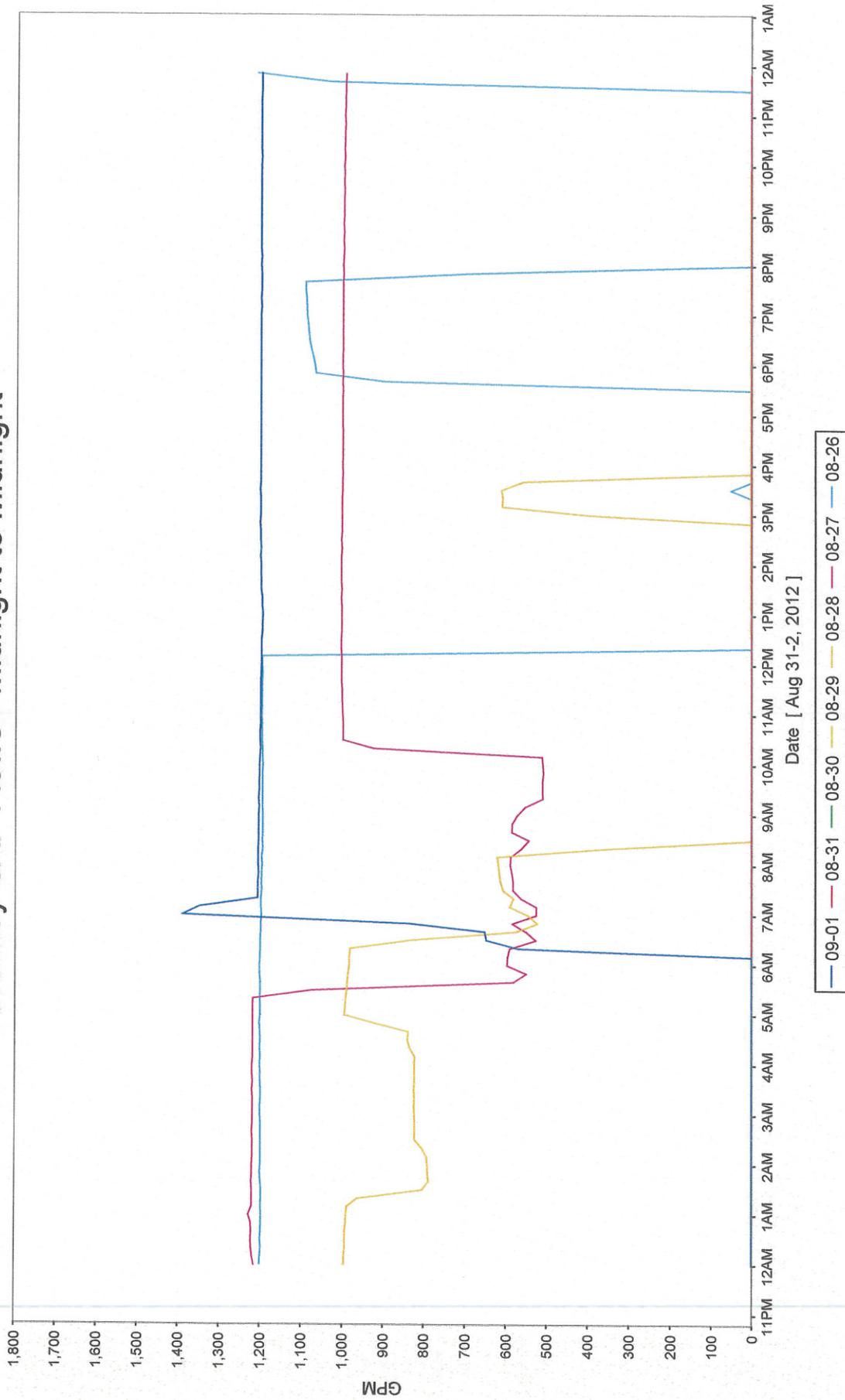
# Brawley SAF Flows - Midnight to Midnight



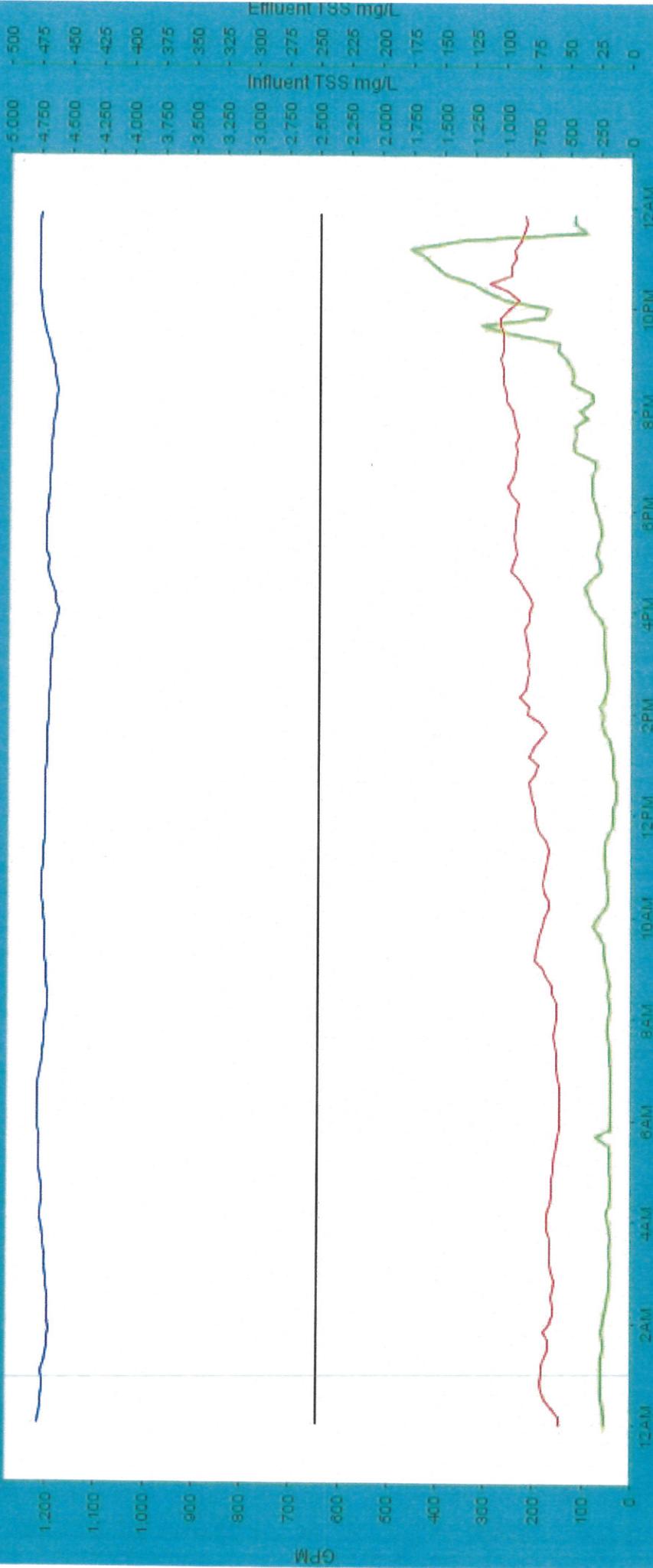
# Brawley SAF Flows - Midnight to Midnight



# Brawley SAF Flows - Midnight to Midnight



National Beef Packing, Brawley, CA  
Waste Water Report for 09-19-2012

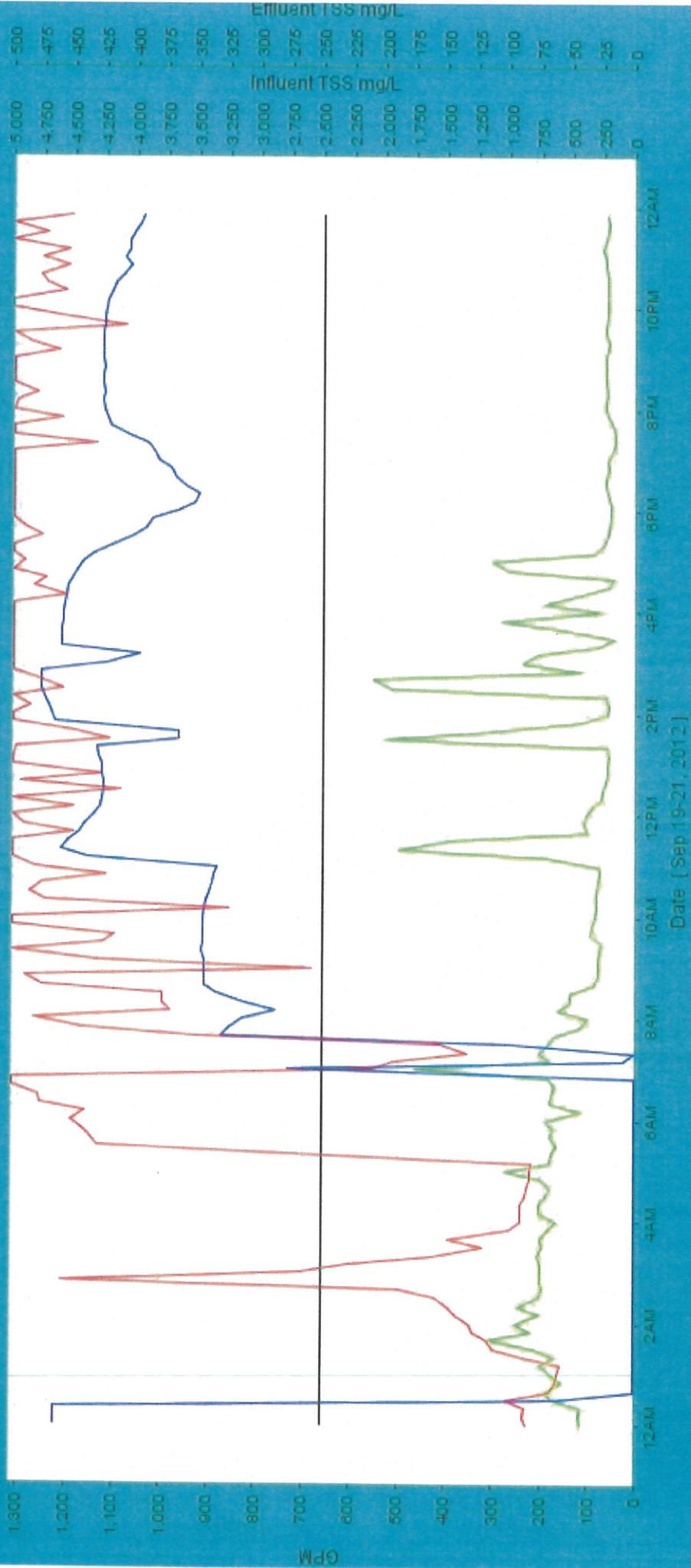


Date [ Sep 18-20, 2012 ]

Date	Avg. GPM	Max. GPM	Min. GPM	Total Gallo...	Meter	Min I_TSS	Max I_TSS	Avg I_TSS	Min E_TSS	Max E_TSS	Avg E_TSS
9-13-2012	1,192	1,296	1	1,712,411	702,437,248	354	4,988	2,812	0	495	7
9-14-2012	1,179	1,257	1	1,692,249	704,129,472	1,251	4,987	2,996	0	378	7
9-15-2012	1,200	1,219	1,158	1,721,846	705,852,544	553	2,777	1,291	33	199	9
9-16-2012	1,201	1,224	1,179	1,724,002	707,577,728	0	4,988	1,218	14	283	10
9-17-2012	885	1,361	1	1,270,642	708,848,384	0	4,988	1,348	0	496	13
9-18-2012	1,215	1,237	1,185	1,745,719	710,594,112	335	2,610	610	15	495	12
9-19-2012	1,206	1,235	1,170	1,731,444	712,325,568	544	1,722	774	11	212	3
Averages	1,154	1,261	671	1,656,902		434	3,866	1,578	11	366	8

Legend: — Flow — Influent TSS — Effluent TSS — Target TSS

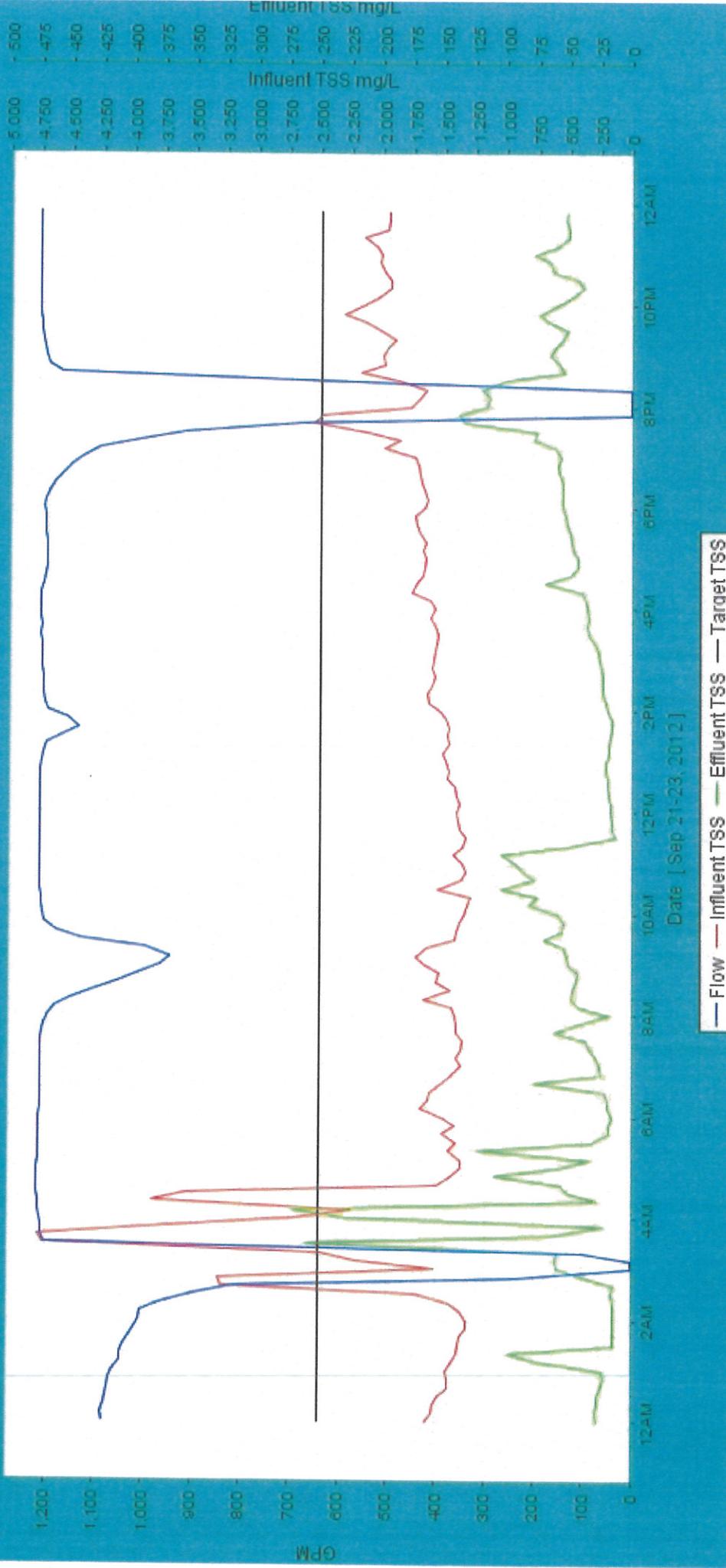
National Beef Packing, Brawley, CA  
Waste Water Report for 09-20-2012



— Flow — Influent TSS — Effluent TSS — Target TSS

Date	Avg. GPM	Max. GPM	Min. GPM	Total Gallo...	Meter	Min I_TSS	Max I_TSS	Avg I_TSS	Min E_TSS	Max E_TSS	Avg E_TSS
9-14-2012	1,179	1,257	1	1,692,249	704,129,472	1,251	4,987	2,996	0	378	1
9-15-2012	1,200	1,219	1,158	1,721,846	705,852,544	553	2,777	1,291	33	199	9
9-16-2012	1,201	1,224	1,179	1,724,002	707,577,728	0	4,988	1,218	14	283	10
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9-18-2012	1,215	1,237	1,185	1,745,719	710,594,112	335	2,610	610	15	495	12
9-19-2012	1,206	1,235	1,170	1,731,444	712,325,568	544	1,722	774	11	212	9
9-20-2012	760	1,275	1	1,090,805	713,417,600	303	4,991	3,847	0	411	9
Averages	1,092	1,258	671	1,568,101		427	3,866	1,726	11	354	9

National Beef Packing, Brawley, CA  
Waste Water Report for 09-22-2012

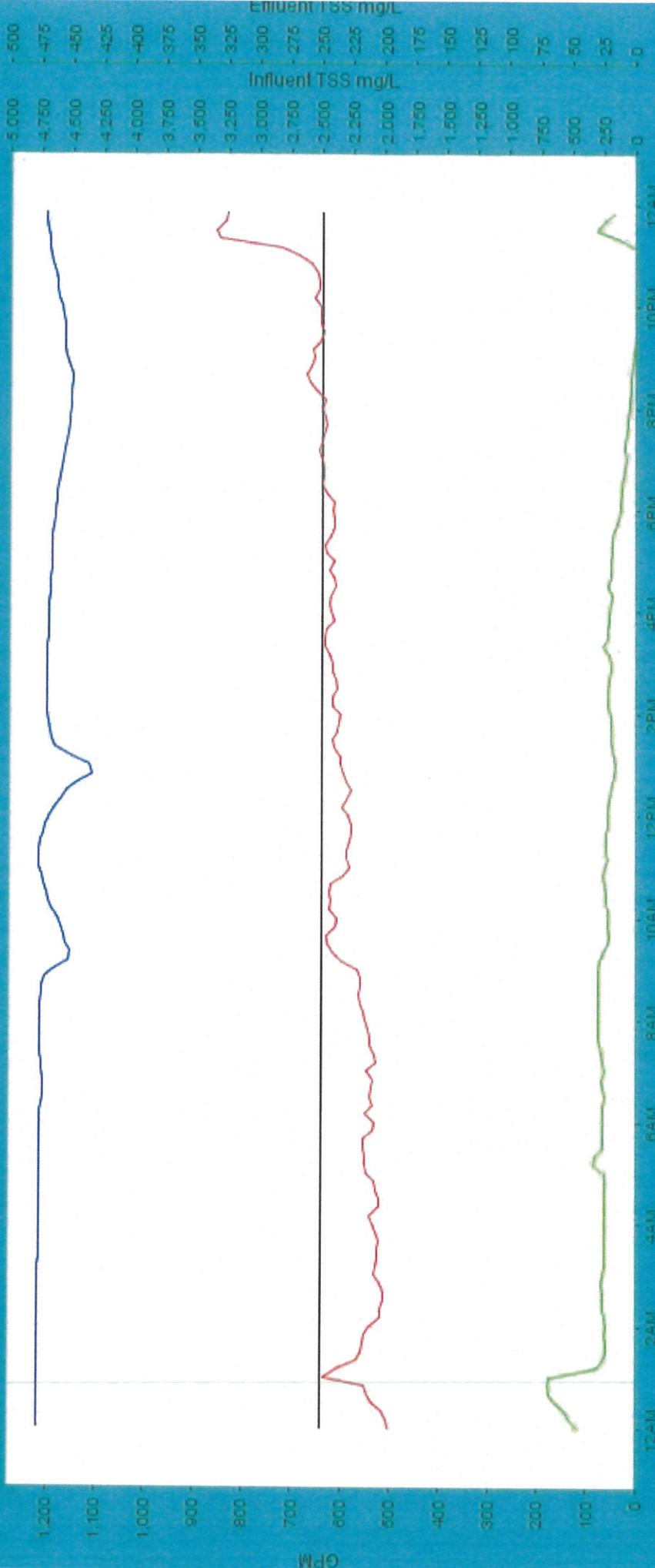


Date [ Sep 21-23, 2012 ]

Date	Avg. GPM	Max. GPM	Min. GPM	Total Gallo...	Meter	Min I. TSS	Max I. TSS	Avg I. TSS	Min E. TSS	Max E. TSS	Avg E. TSS
9-16-2012	1,201	1,224	1,179	1,724,002	707,577,728	0	4,988	1,218	14	283	10
9-17-2012	885	1,361	1	1,270,642	708,848,384	0	4,988	1,348	0	496	10
9-18-2012	1,215	1,237	1,185	1,745,719	710,594,112	335	2,610	610	15	495	10
9-19-2012	1,206	1,235	1,170	1,731,444	712,325,568	544	1,722	774	11	212	10
9-20-2012	760	1,275	1	1,090,805	713,417,600	303	4,991	3,847	0	411	10
9-21-2012	658	1,520	1	944,387	714,363,008	57	4,991	3,701	0	496	10
9-22-2012	1,101	1,464	1	1,580,775	715,943,744	974	4,992	1,759	5	499	10
Averages	1,004	1,331	505	1,441,111		316	4,183	1,894	7	413	10

Legend: — Flow — Influent TSS — Effluent TSS — Target TSS

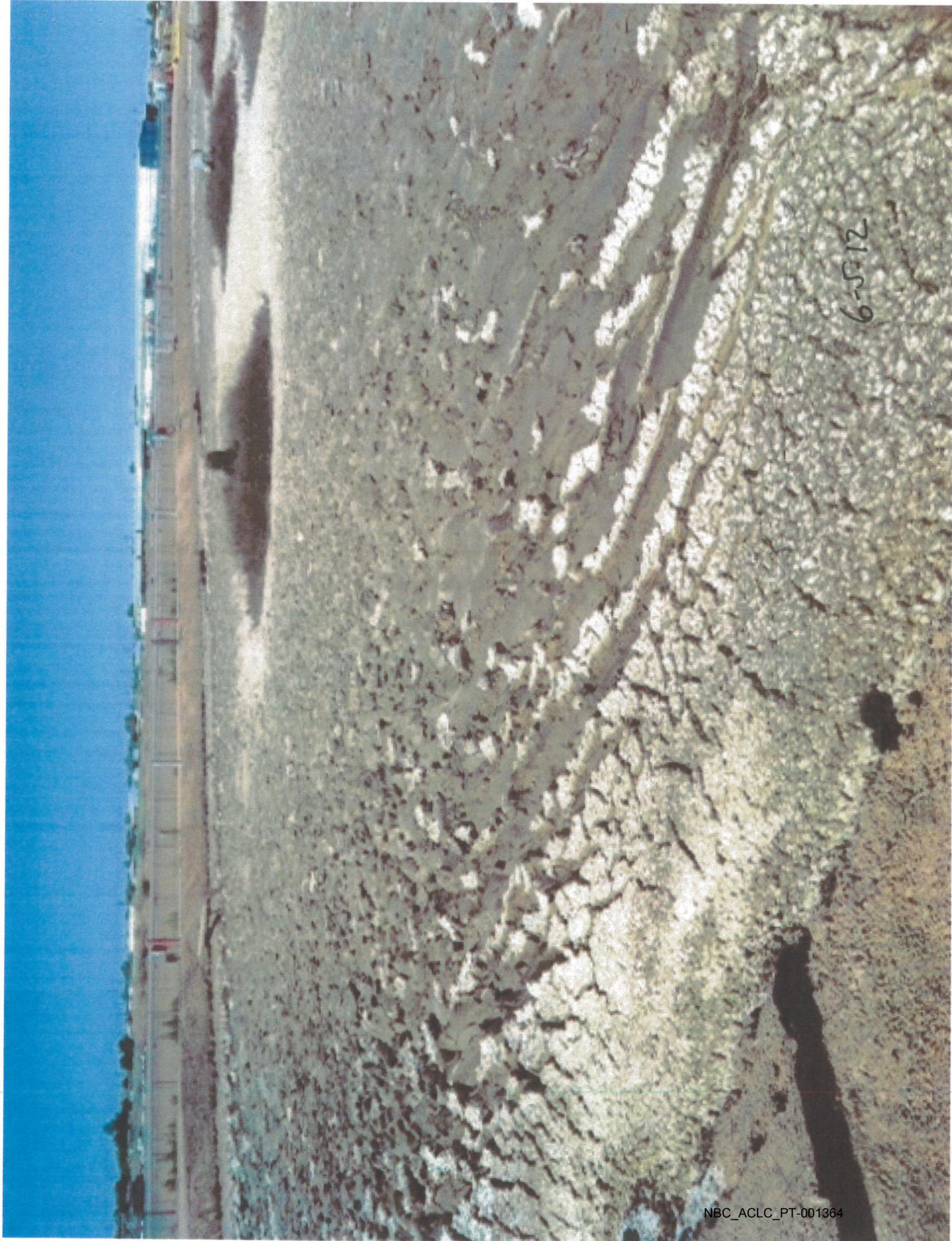
National Beef Packing, Brawley, CA  
Waste Water Report for 09-23-2012



Date [ Sep 23-24, 2012 ]

Date	Avg. GPM	Max. GPM	Min. GPM	Total Gallo...	Meter	Min I_TSS	Max I_TSS	Avg I_TSS	Min E_TSS	Max E_TSS	Avg E_TSS
9-17-2012	885	1,361	1	1,270,642	708,848,384	0	4,988	1,348	0	496	1,348
9-18-2012	1,215	1,237	1,185	1,745,719	710,594,112	335	2,610	610	15	495	1,348
9-19-2012	1,206	1,235	1,170	1,731,444	712,325,568	544	1,722	774	11	212	1,348
9-20-2012	760	1,275	1	1,090,805	713,417,600	303	4,931	3,847	0	411	1,348
9-21-2012	658	1,520	1	944,387	714,363,008	57	4,931	3,701	0	496	1,348
9-22-2012	1,101	1,464	1	1,580,775	715,943,744	974	4,992	1,759	5	499	1,348
9-23-2012	1,196	1,231	1,088	1,716,393	717,660,160	1,940	3,440	2,340	0	105	1,348
Averages	1,003	1,332	492	1,440,024		593	3,962	2,054	5	388	1,348

— Flow — Influent TSS — Effluent TSS — Target TSS



6-5-12

6-5-12

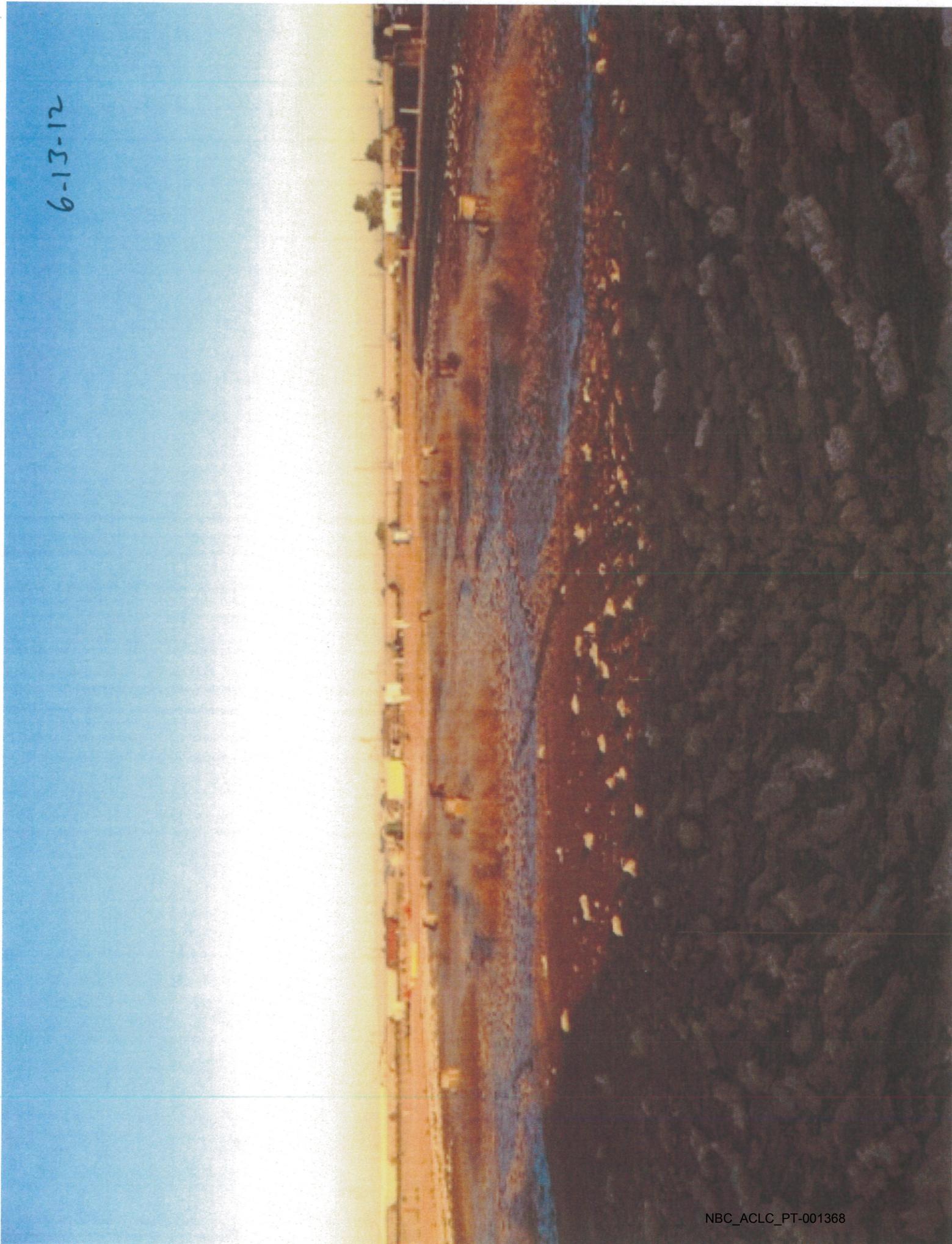


21-11-9

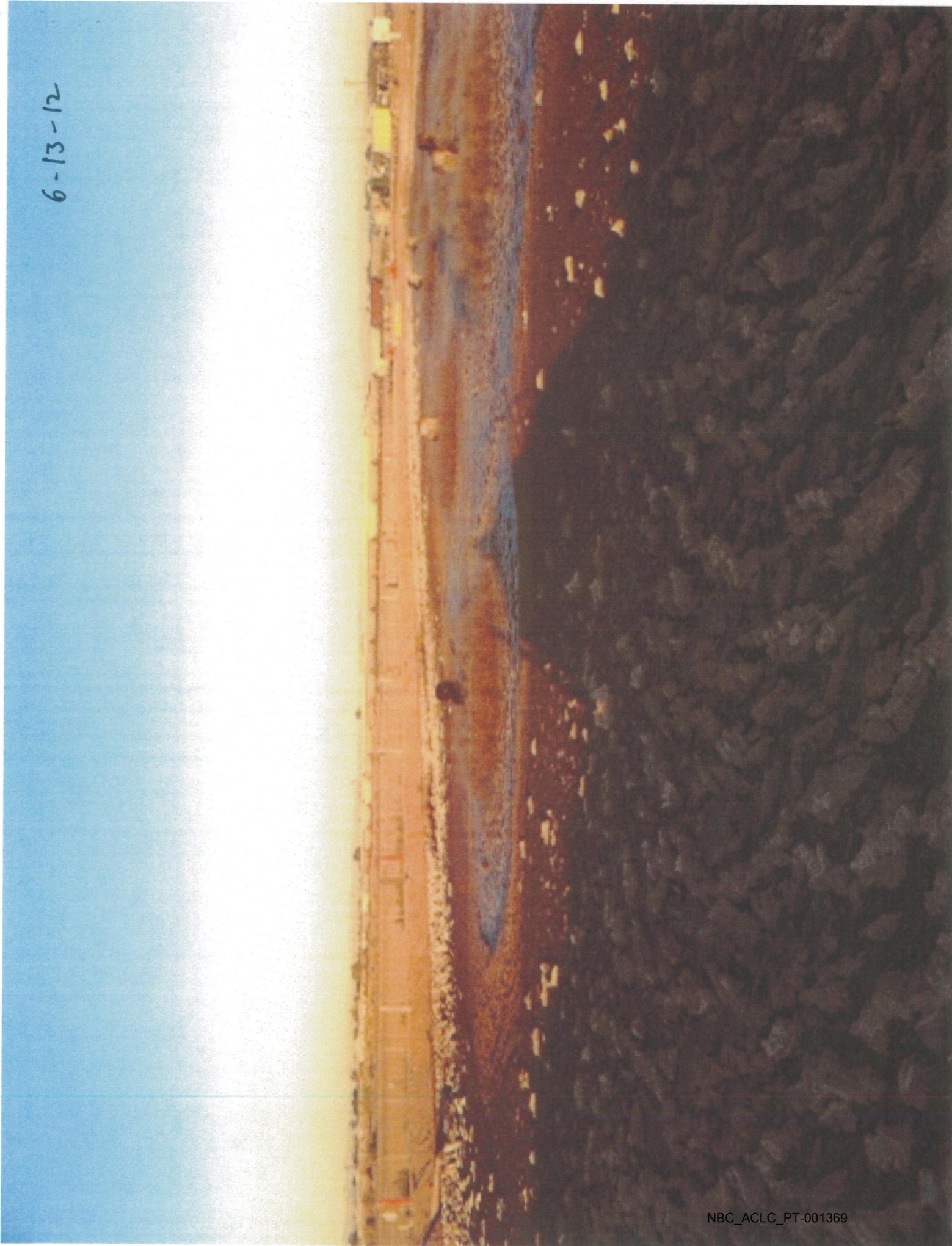


6-11-12

6-13-12



6-13-12



7-18-12



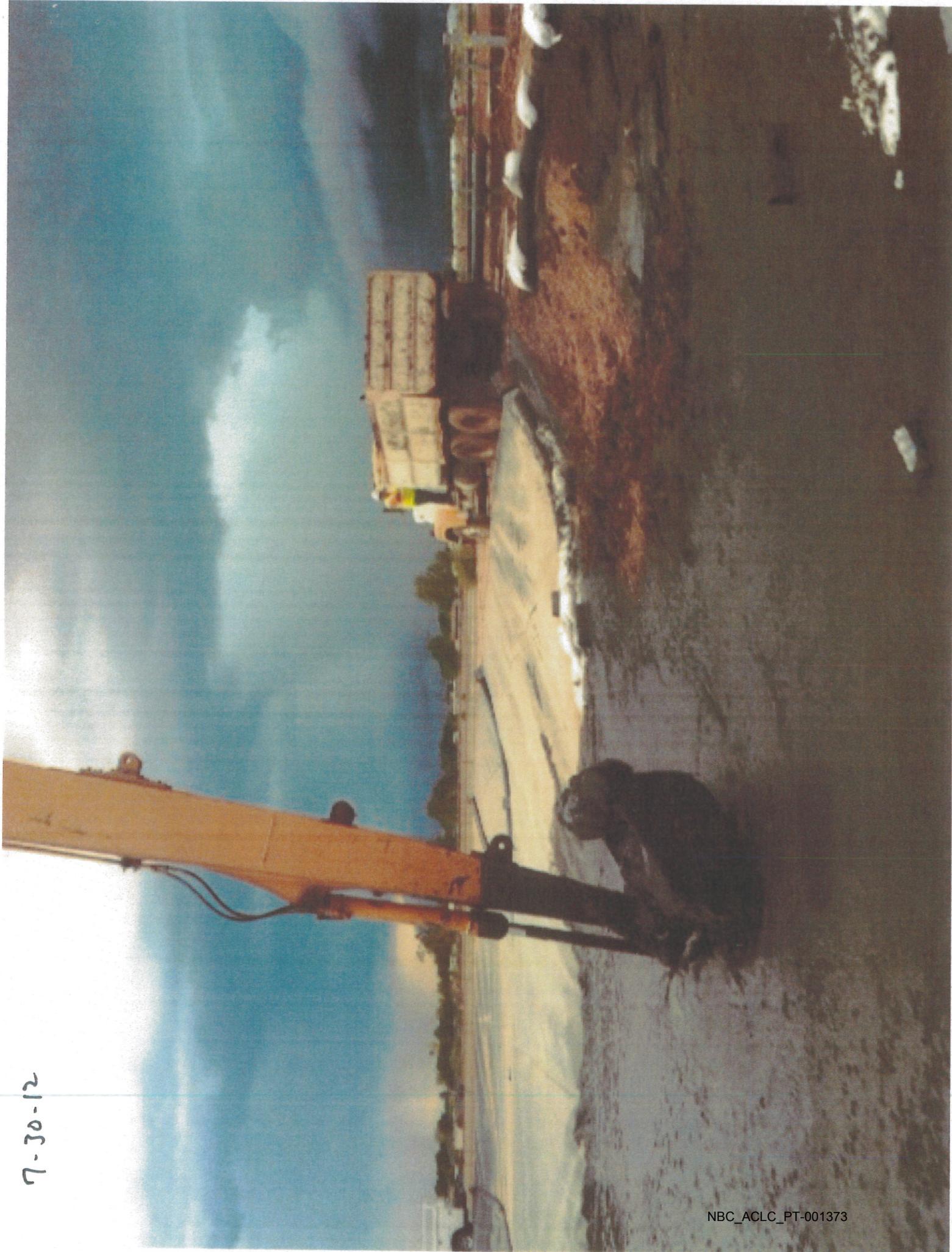
7-18-12



7-18-12



7-30-12

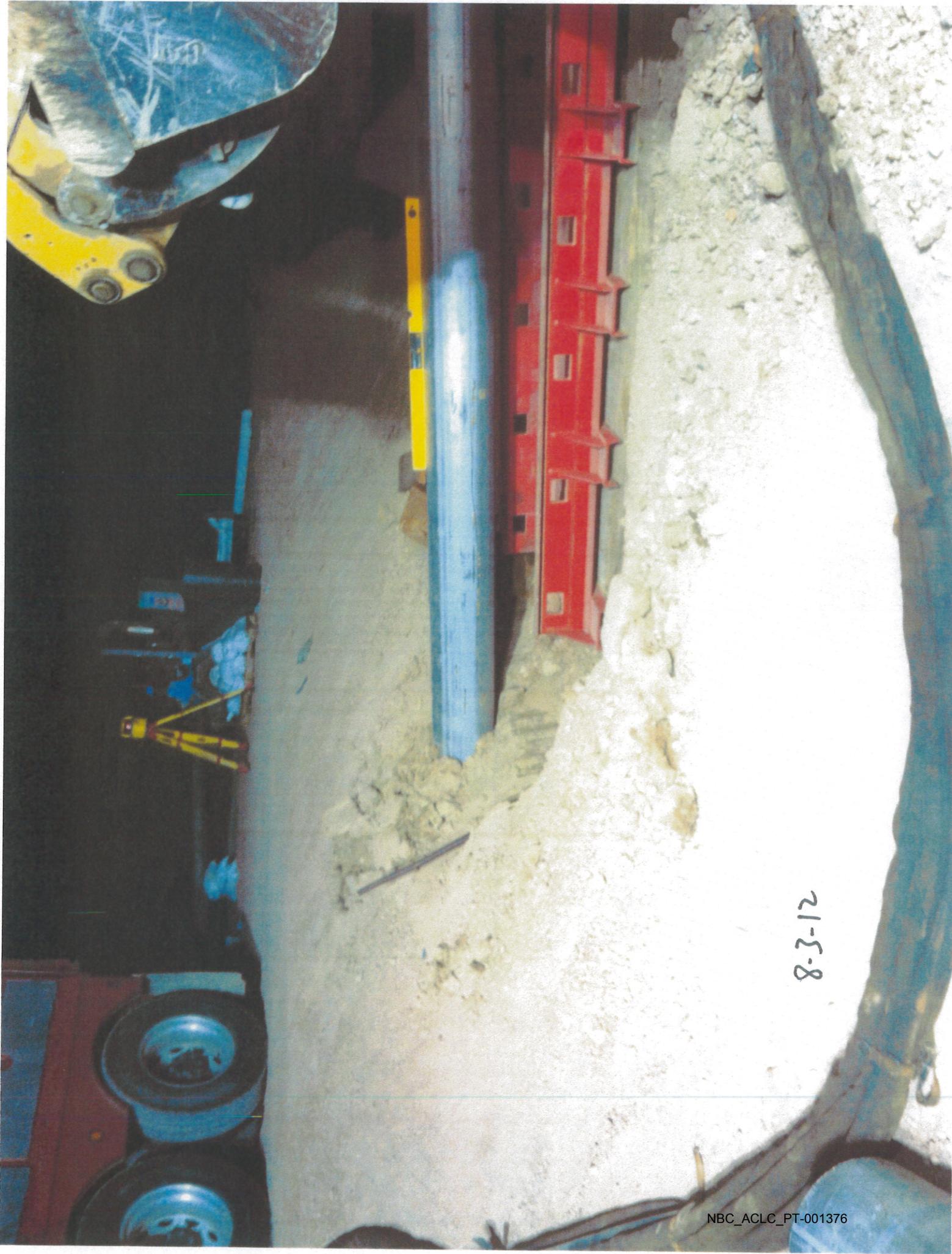




7-30-12



8-3-12



8-3-12

8-4-12



8-4-12



8-4-12





8-4-12

8-4-12



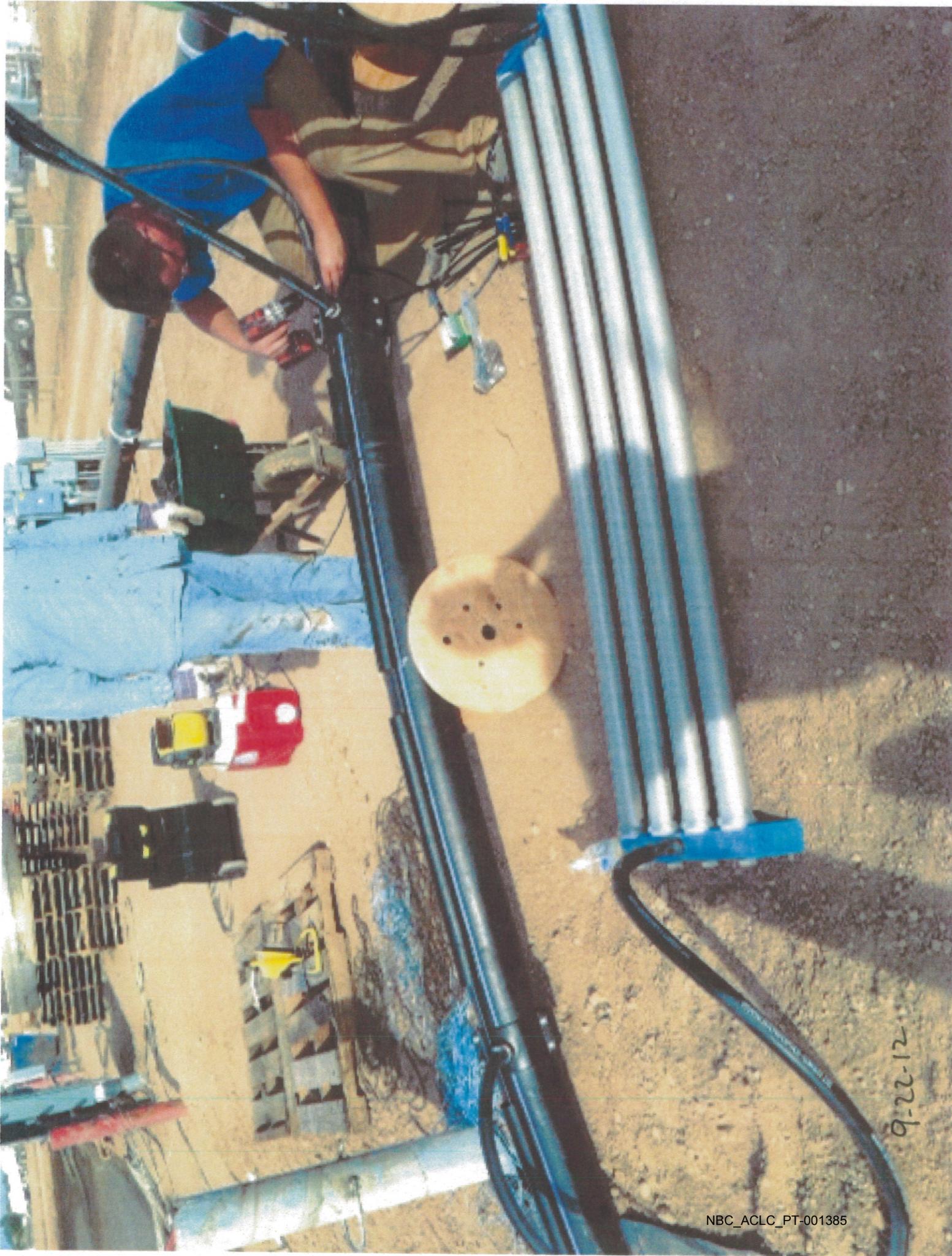
8-4-12



COD  
SITE 6  
D80612  
1045

FOG  
SITE 6  
D80612  
1045





9-22-12

9-22-12





### PROJECT SCHEDULE

DATE 7-25-2012 Updated 9-24-12

PROJECT Brawley WW Action Plan Schedule

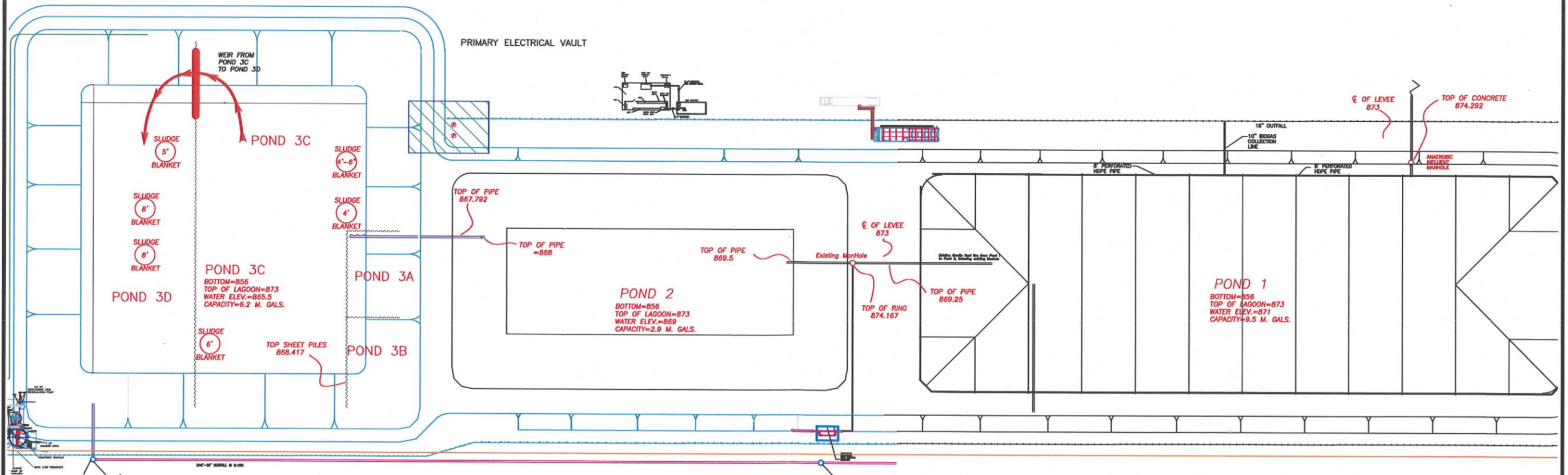
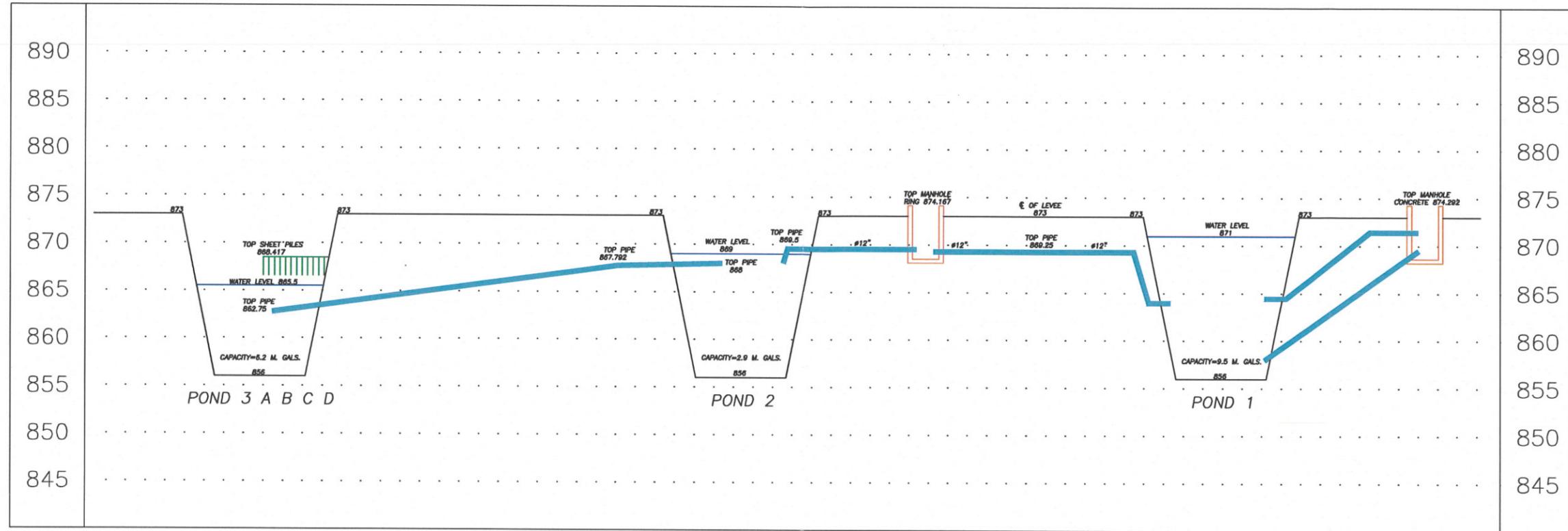
Legend:



Item	Week Beginning Date																							
	Wk of 7/23	Wk of 7/30	Wk of 8/6	Wk of 8/13	Wk of 8/20	Wk of 8/27	Wk of 9/3	Wk of 9/10	Wk of 9/17	Wk of 9/24	Wk of 10/1	Wk of 10/8	Wk of 10/15	Wk of 10/22	Wk of 10/29	Wk of 11/5	Wk of 11/12	Wk of 11/19	Wk of 11/26	Wk of 12/3	Wk of 12/10	Wk of 12/17	Wk of 12/24	Wk of 12/31
<b>1.0 PLANT CONSERVATION</b>																								
1.1	Daily Conservation Evaluation																							
1.2	Post Production Curtailment Procedures																							
1.3	Weekend Curtailment Procedures																							
1.4	Dedicated Resource on Brawley WasteWater Systems (Corp. Engrs.)																							
1.5	Friday Project/Planning Review Meeting																							
<b>2.0 DAF</b>																								
2.1	Westphalia #2 Grease Profile																							
2.2	ChemTreat Stick Water Testing																							
2.3	Monitoring in/out (COD, FOG, BOD)																							
2.4	Paunch/Grit in DAF																							
2.5	Grease Cap Monitoring (new Sludge Judge)																							
2.6	Install Additional Composite Sampler on DAF Effluent																							
<b>3.0 POND #1 - Anerobic</b>																								
3.1	Pond 1 -2 Sampling (COD, FOG,BOD)																							
3.2	Pond 1 Outfall MH Design																							
3.3	Pond 1 Effluent Piping Modification (New Pipe on South Side w/Pump)																							
3.4	Pond 1 DAF Installation (Remove Grease Prior to Pond 2)																							
3.5	Pond 1 Level Monitoring																							
3.6	BioGas Burn Control (Boiler/Flare Simultaneously)																							
3.7	Turret Sampling Installed in Composite Samplers																							
<b>4.0 POND #2 - Aerobic</b>																								
4.1	Recirculation Mixing/Air Injection																							
4.2	Bottom Air Injection Phase 1 (2 Diffusers)																							
4.3	Bottom Air Injection Phase 2 (2 Diffusers)																							
4.4	Chemical Aeration Test (NaNi injection)																							
4.5	Pond 2 Level Control																							
4.6	Continous Flow Management - RAS/WAS Pump Curve																							
4.7	Pond 2 Grease Cap Skimming (Track Hoe)																							
<b>5.0 POND 3A &amp; 3B</b>																								
5.1	Level Sensor (Commission)																							
5.2	Back up Pump Piping Mods																							
<b>6.0 POND 3C &amp; POND 4</b>																								
6.1	Split/Clean 3C (Configure for Polishing Pond)																							
6.1a	Plan/Evaluation/Design																							
6.1b	Installation																							
6.1c	Commission																							
6.1d	3C Dredge																							
6.2	Build Pond 4 (Pond & System Equipment) Feasibility																							
6.3	Plan/Evaluation/Design																							
6.4	Enlist Design/Engineering Firm																							
<b>7.0 SAF</b>																								
7.1	Sludge Pumps (2 pumps test for 4 weeks)																							
7.2	Dynamic Treatment Control (Poly Trace System, Sensor/Probes)																							
7.2a	Plan/Install																							
7.2b	Commission																							
7.3	Polymer Aging Upgrade																							
7.4	Retrfit or Upgrade																							
7.5	Jar Testing on Coagulant/Polymer (Short Term Emerg Response Plan)																							
7.6	Inline Monitoring																							
7.6a	TOC (COD), TSS, NH3, DO																							
<b>8.0 CONTRACT WASTEWATER OVERSIGHT REVIEW</b>																								
8.1	Develop Scope for continued Monitoring Processes																							
8.2	Data Review (Outside Consultant/Engineers)																							
8.3	Odor Control																							

30  
2345

# HYDRAULIC PROFILE

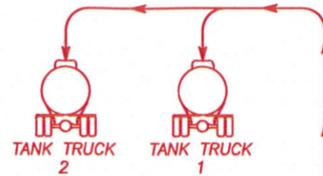


DATE	SCALE	DRAWN BY	LOCATION	PRELIMINARY	TITLE	CAD FILE #:	PROJECT #:	DWG. #:	ISSUES	REVISIONS																																								
09/10/12	N.T.S.	J GUNKEL	CAD/BRAWLEY/PLANT DISCHARGE	NOT FOR CONSTRUCTION	LAGOON LAYOUTS 9 10 12				<table border="1" style="font-size: 8px;"> <tr><th>NO.</th><th>DATE</th><th>BY</th><th>REMARKS</th></tr> <tr><td>1</td><td>0000</td><td>0000</td><td>0000</td></tr> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td></tr> </table>	NO.	DATE	BY	REMARKS	1	0000	0000	0000	2				3				4				<table border="1" style="font-size: 8px;"> <tr><th>NO.</th><th>DATE</th><th>BY</th><th>REMARKS</th></tr> <tr><td>1</td><td>0000</td><td>0000</td><td>0000</td></tr> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td></tr> </table>	NO.	DATE	BY	REMARKS	1	0000	0000	0000	2				3				4			
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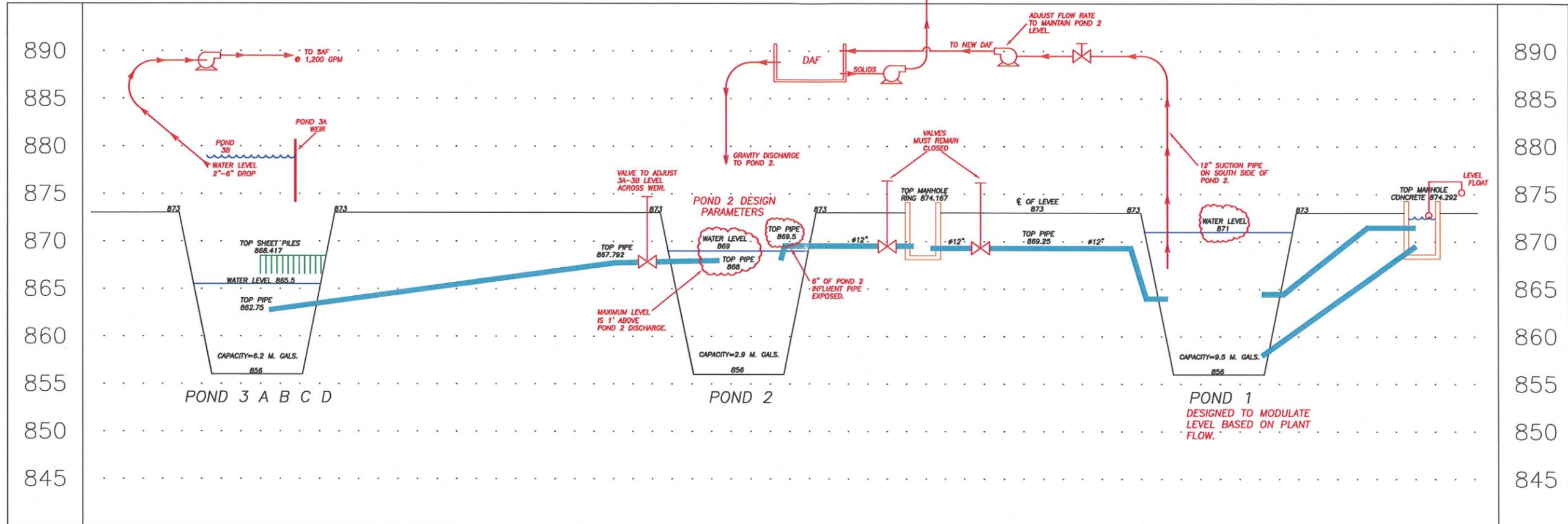


# BRAWLEY WASTEWATER MANAGEMENT PLAN

\*NO WATER IN POND 3C



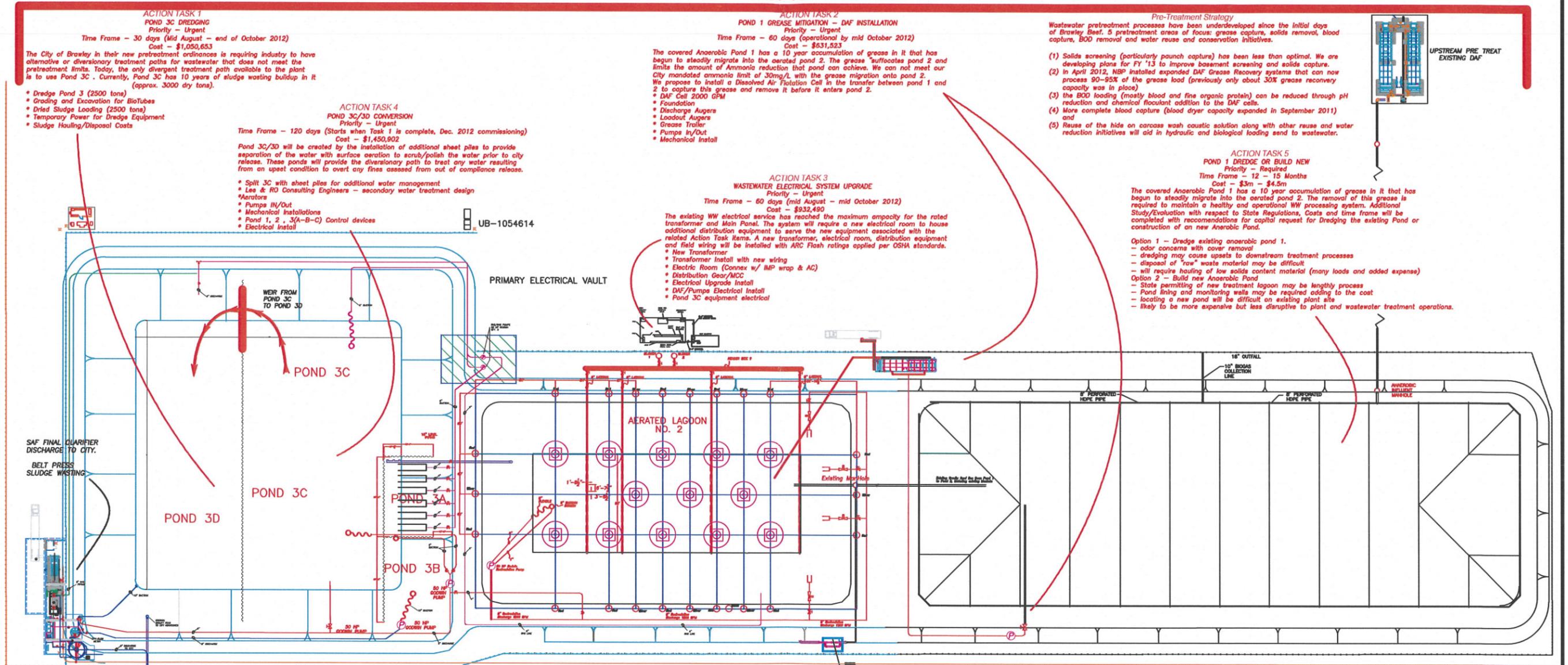
\*POND 1 DISCHARGE MUST BE ROUTED THROUGH DAF WITH FLOC GENERATOR OPERATING @ 30-35 GPM.



DATE	SCALE	DRAWN BY	LOCATION	PRELIMINARY NOT FOR CONSTRUCTION	TITLE	CAD FILE #:	PROJECT #:	DWG. #:	ISSUES	REVISIONS	 <b>National Beef.</b> BRAWLEY, CA.																																								
09/25/12	N.T.S.	J GUNKEL	CAD/BRAWLEY/PLANT DISCHARGE		LAGOON LAYOUTS 9 10 12			MANAGEMENT PLAN	<table border="1" style="font-size: 8px;"> <tr><th>NO.</th><th>DATE</th><th>BY</th><th>REMARKS</th></tr> <tr><td>1</td><td>0000</td><td>0000</td><td>0000</td></tr> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td></tr> </table>	NO.		DATE	BY	REMARKS	1	0000	0000	0000	2				3				4				<table border="1" style="font-size: 8px;"> <tr><th>NO.</th><th>DATE</th><th>BY</th><th>REMARKS</th></tr> <tr><td>1</td><td>0000</td><td>0000</td><td>0000</td></tr> <tr><td>2</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td></tr> </table>	NO.	DATE	BY	REMARKS	1	0000	0000	0000	2				3				4			
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**ACTION PLAN AUGUST 2012**

Rev 1C



**ACTION TASK 1**  
**POND 3C DREDGING**  
 Priority - Urgent  
 Time Frame - 30 days (Mid August - end of October 2012)  
 Cost - \$1,050,653

The City of Brawley in their new pretreatment ordinances is requiring industry to have alternative or diversionary treatment paths for wastewater that does not meet the pretreatment limits. Today, the only divergent treatment path available to the plant is to use Pond 3C. Currently, Pond 3C has 10 years of sludge wasting buildup in it (approx. 3000 dry tons).

- \* Dredge Pond 3 (2500 tons)
- \* Grading and Excavation for BioTubes
- \* Dried Sludge Loading (2500 tons)
- \* Temporary Power for Dredge Equipment
- \* Sludge Hauling/Disposal Costs

**ACTION TASK 4**  
**POND 3C/3D CONVERSION**  
 Priority - Urgent

Time Frame - 120 days (Starts when Task 1 is complete, Dec. 2012 commissioning)  
 Cost - \$1,450,902

Pond 3C/3D will be created by the installation of additional sheet piles to provide separation of the water with surface aeration to scrub/polish the water prior to city release. These ponds will provide the diversionary path to treat any water resulting from an upset condition to avert any fines assessed from out of compliance release.

- \* Split 3C with sheet piles for additional water management
- \* Lee & RO Consulting Engineers - secondary water treatment design
- \* Aerators
- \* Pumps In/Out
- \* Mechanical Installations
- \* Pond 1, 2, 3(A-B-C) Control devices
- \* Electrical Install

UB-1054614

**ACTION TASK 2**  
**POND 1 GREASE MITIGATION - DAF INSTALLATION**  
 Priority - Urgent  
 Time Frame - 60 days (operational by mid October 2012)  
 Cost - \$631,523

The covered Anaerobic Pond 1 has a 10 year accumulation of grease in it that has begun to steadily migrate into the aerated pond 2. The grease "suffocates" pond 2 and limits the amount of Ammonia reduction that pond can achieve. We can not meet our City mandated ammonia limit of 30mg/L with the grease migration onto pond 2. We propose to install a Dissolved Air Flotation Cell in the transfer between pond 1 and 2 to capture this grease and remove it before it enters pond 2.

- \* DAF Cell 2000 GPM
- \* Foundation
- \* Discharge Augers
- \* Loadout Augers
- \* Grease Trailer
- \* Pumps In/Out
- \* Mechanical Install

**ACTION TASK 3**  
**WASTEWATER ELECTRICAL SYSTEM UPGRADE**  
 Priority - Urgent

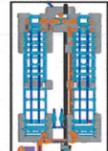
Time Frame - 60 days (mid August - mid October 2012)  
 Cost - \$932,490

The existing WW electrical service has reached the maximum ampacity for the rated transformer and Main Panel. The system will require a new electrical room to house additional distribution equipment to serve the new equipment associated with the related Action Task items. A new transformer, electrical room, distribution equipment and field wiring will be installed with ARC Flash ratings applied per OSHA standards.

- \* New Transformer
- \* Transformer Install with new wiring
- \* Electric Room (Concess w/ IMP wrap & AC)
- \* Distribution Gear/MCC
- \* Electrical Upgrade Install
- \* DAF/Pumps Electrical Install
- \* Pond 3C equipment electrical

**Pre-Treatment Strategy**  
 Wastewater pretreatment processes have been underdeveloped since the initial days of Brawley Beef. 5 pretreatment areas of focus: grease capture, solids removal, blood capture, BOD removal and water reuse and conservation initiatives.

- (1) Solids screening (particularly paunch capture) has been less than optimal. We are developing plans for FY '13 to improve basement screening and solids capture.
- (2) In April 2012, NSP installed expanded DAF Grease Recovery systems that can now process 90-95% of the grease load (previously only about 30% grease recovery capacity was in place)
- (3) the BOD loading (mostly blood and fine organic protein) can be reduced through pH reduction and chemical flocculant addition to the DAF cells.
- (4) More complete blood capture (blood dryer capacity expanded in September 2011) and
- (5) Reuse of the hide on carcass wash caustic solution along with other reuse and water reduction initiatives will aid in hydraulic and biological loading send to wastewater.



UPSTREAM PRE TREAT EXISTING DAF

**ACTION TASK 5**  
**POND 1 DREDGE OR BUILD NEW**  
 Priority - Required  
 Time Frame - 12 - 15 Months  
 Cost - \$3m - \$4.5m

The covered Anaerobic Pond 1 has a 10 year accumulation of grease in it that has begun to steadily migrate into the aerated pond 2. The removal of this grease is required to maintain a healthy and operational WW processing system. Additional Study/Evaluation with respect to State Regulations, Costs and time frame will be completed with recommendations for capital request for Dredging the existing Pond or construction of a new Anaerobic Pond.

- Option 1 - Dredge existing anaerobic pond 1.
- odor concerns with cover removal
  - dredging may cause upsets to downstream treatment processes
  - disposal of "raw" waste material may be difficult
  - will require hauling of low solids content material (many loads and added expense)
- Option 2 - Build new Anaerobic Pond
- State permitting of new treatment lagoon may be lengthy process
  - Pond lining and monitoring wells may be required adding to the cost
  - locating a new pond will be difficult on existing plant site
  - likely to be more expensive but less disruptive to plant and wastewater treatment operations.

APPROVED 12BR036

**POND 2 MIXING/BOTTOM AERATION**

Priority - Urgent  
 Time Frame - 30 days (will complete in mid September 2012)  
 Cost - \$540,356

Brawley Ammonia discharge levels are consistently above the allowable limits resulting in fine assessments from the City. The DO (Dissolved Oxygen) levels in Pond 2 specifically affect the ability for the system to remove Ammonia from the water prior to discharge to the City. The existing aeration system in Pond 2 does not provide oxygenation into the full depth of the lagoon limiting the DO production. The installation of a recirculation system with air injectors has been completed. The second phase of the project is to install 2 air blowers providing 1400 SCFM into 4 - Diffuser Chain Bottom supply systems to provide the additional oxygenation required to avert fines and potential cease and desist order from the city.

**COMPLETED WORK**

**Emergency Pond 1 Grease Response**

Priority - Urgent  
 Time Frame - Complete  
 Cost - \$291,721

Grease migration into Pond 2 creates an upset condition that "Chokes" the operation of Pond 2 resulting in an upset condition for the city. These conditions have occurred 3 times since June 2, 2012 requiring the following work to be completed with the highest level of urgency.

- \* July 25th - August 13th - Excavation Pond 1 Sludge, Hauling, Vacuum Removal of Surface Grease
- \* Sludge Hauling to Disposal Site
- \* Underground Mechanical/Booring/Dirt Work
- \* Tarp Removal/Replace, Access port install
- \* Temporary Electric
- \* Chemicals (Coagulant, Anti Foam, Polymer)
- \* Chemical Dosing Equipment

**CAPITAL COST SUMMARY**

1- Action Task 1	Pond 3C Dredging	\$1,050,653
2- Action Task 2	Pond 1 Grease Mitigation - DAF	\$ 631,523
3- Action Task 3	Electrical Upgrade	\$ 932,490
4- Action Task 4	Pond 3C/3D Conversion	\$1,450,902
5- Action Task 5	Dredge Pond 1 or Build New	TBD
6- 12BR036	Pond 2 Mixing/Bottom Aeration	\$ 540,356
7- E- Number	Emergency Pond 1 Grease Response	\$ 291,721
<b>TOTAL</b>		<b>\$4,897,645</b>
<b>TOTAL additional funds needed (1,2,3,4 &amp; 7)</b>		<b>\$4,357,289</b>

**CITY EFFLUENT LIMITS:**

TSS	- 250 PPM
BOD	- 250 PPM
AMMONIA (NH <sub>3</sub> )	- 30 PPM
TYPICAL FLOW	- 1-1.4 MGD

**HISTORY**

DATE	SCALE	DRAWN BY	LOCATION	PRELIMINARY
09/10/12	N.T.S.	J GUNKEL	CAD/BRAWLEY/PLANT DISCHARGE	NOT FOR CONSTRUCTION

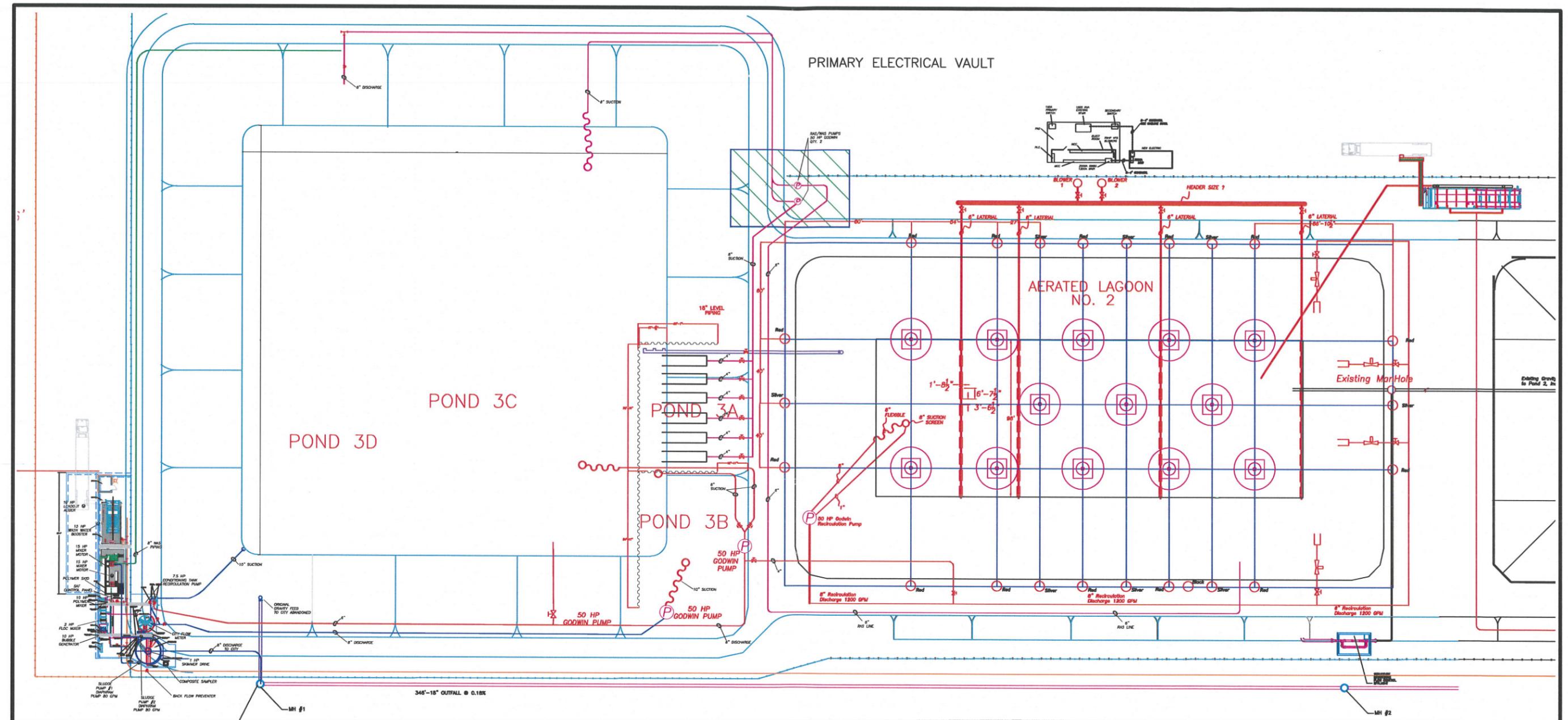
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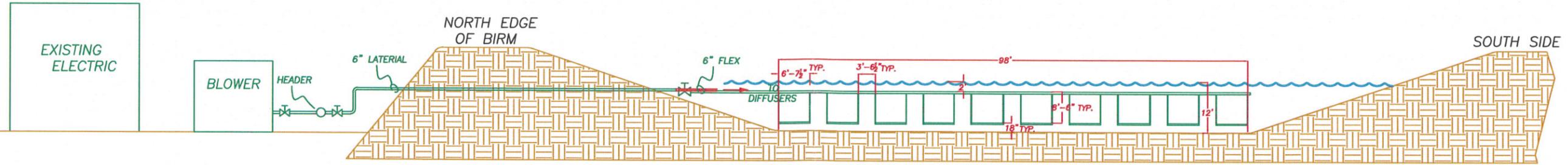
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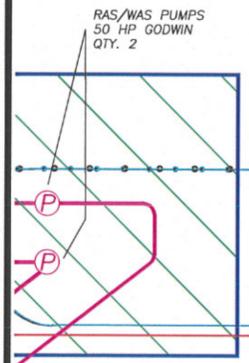
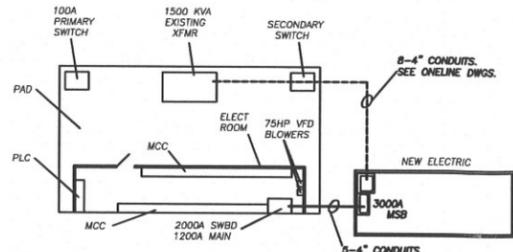
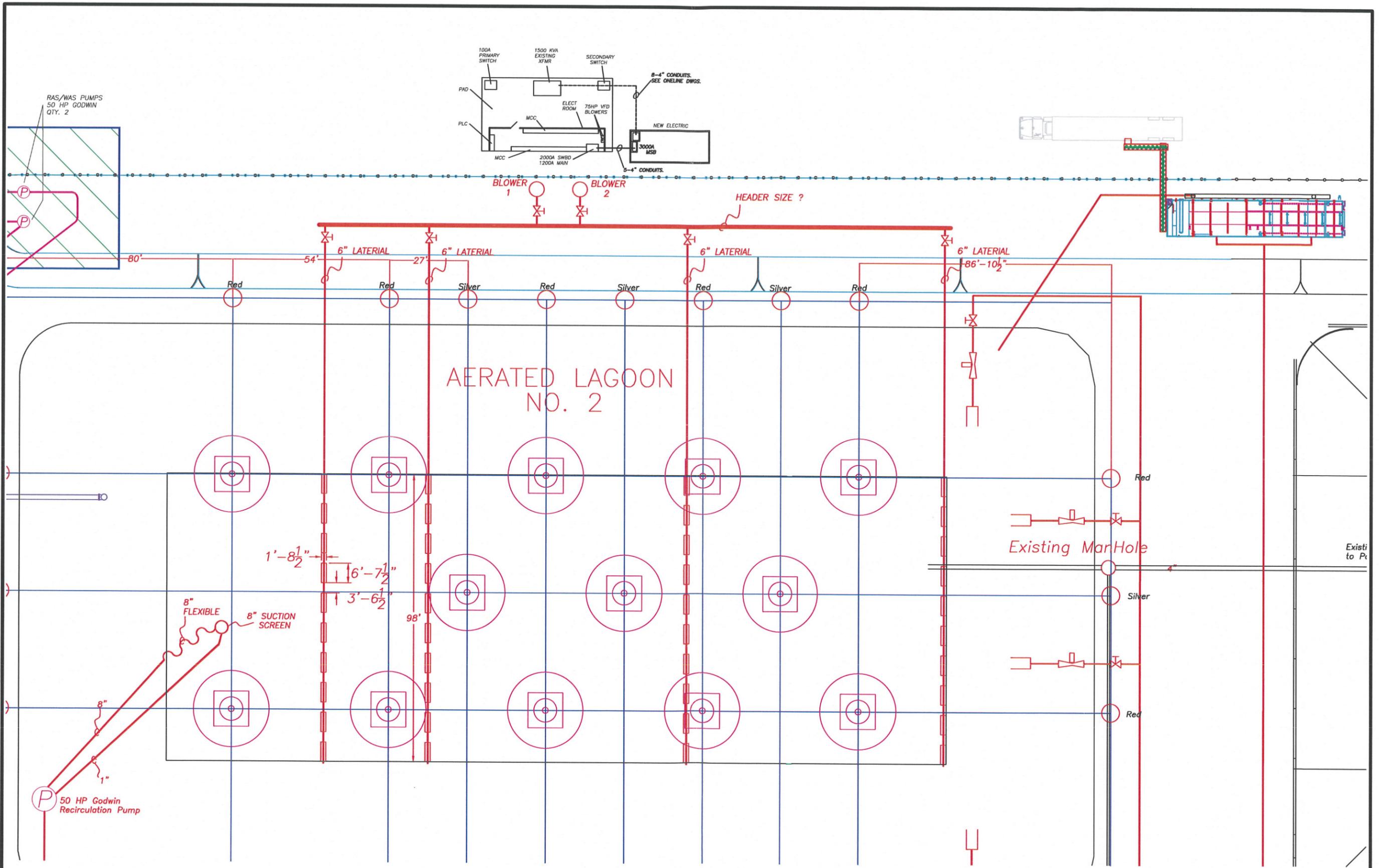
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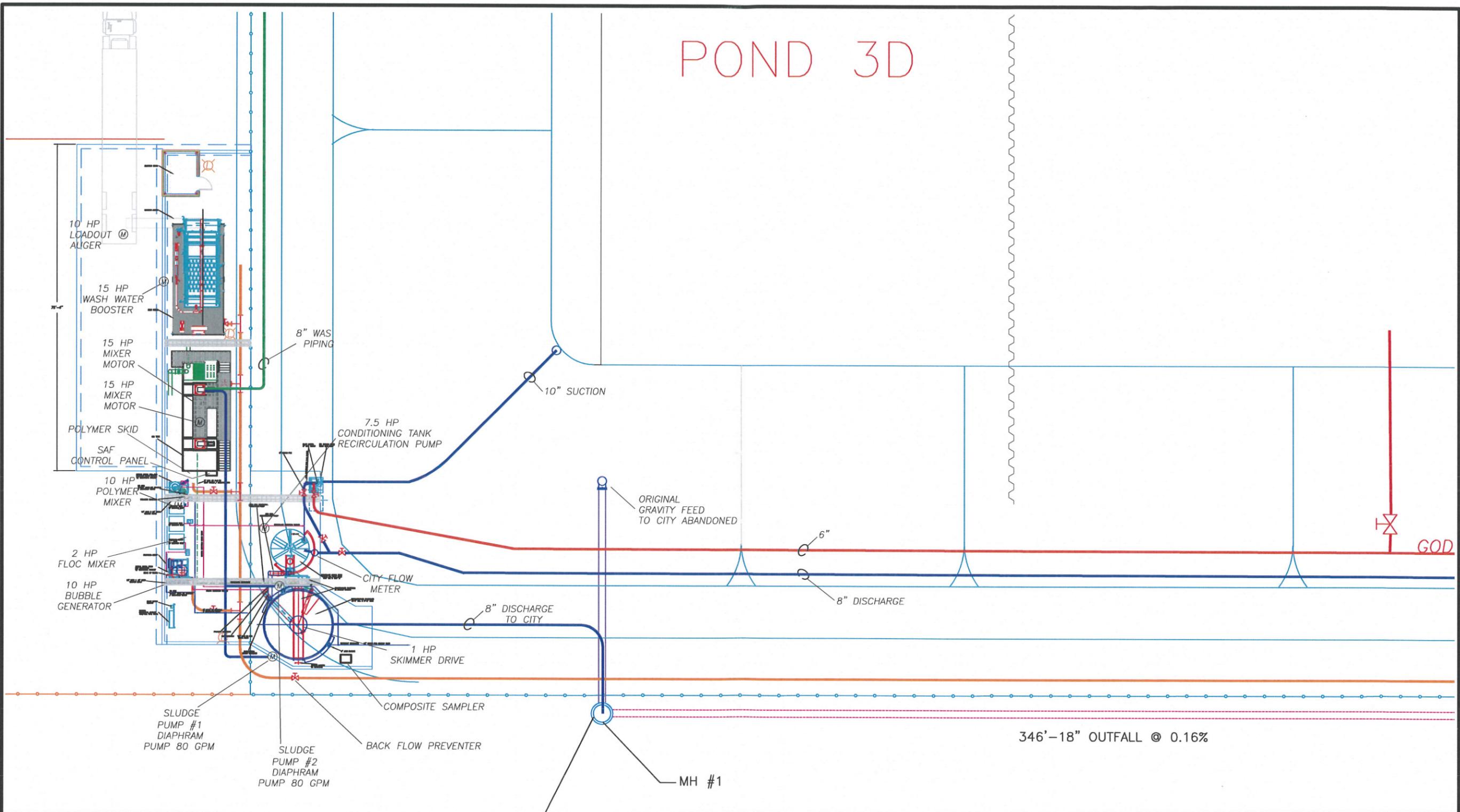




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# POND 3D



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