National Beef®

June 5, 2014

Jose Angel
Assistant Executive Officer
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Re: Submittal of Work Plans in Accordance with Cleanup and Abatement Order R7-2014-0033

Dear Mr. Angel:

Pursuant to Paragraph B.1.b. and B.1.c. of the above-referenced Cleanup and Abatement Order, National Beef California, LP (National Beef) is submitting the attached "Wastewater Pre-Treatment Facility Closure Work Plan" and "Wastewater Pre-Treatment Facility Final Effluent Work Plan" to the Colorado River Basin Water Board. Please note that Paragraph B of the Order prescribes certain notifications and submittals under "Alternative 2: Facility Ceases Operations and All On-site Discharges of Wastes." As discussed in previous meetings and to confirm, National Beef discontinued all harvest operations on May 21, 2014, and all fabrication operations on May 23, 2014.

Please feel free to contact me if you have any questions or need additional information.

Sincerely,

NATIONAL BEEF CALIFORNIA, LP

William A. (Bud) Ludwig, Jr.
Corporate Environmental Director

cc: Brian Webb, National Beef
Ryan Johansen, National Beef
David Kalscheur, National Beef
Donnie Shaw, National Beef
Bret Wilson, National Beef

57 EAST SHANK ROAD • BRAWLEY CA • 92227
PHONE: 760-351-2700 • FAX: 760-351-2796

WASTEWATER PRE-TREATMENT FACILITY CLOSURE WORKPLAN

WASTEWATER PRE-TREATMENT FACILITY
NATIONAL BEEF
BRAWLEY, CALIFORNIA
JUNE 4, 2014

Report Prepared By:
HR GREEN, INC.

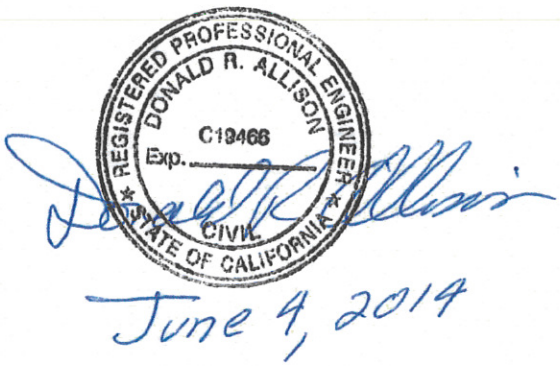
Certifications Page

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of California.

It is understood and agreed that the Consultant's Scope of Services under the current Agreement may not include subsequent field work, project observation or review of the Contractor's performance or any other construction phase services, and that such services will be provided for by the Client. The Client assumes all responsibility for interpretation of the Contract Documents and for construction observation and the Client waives any claims against the Consultant that may be in any way connected thereto.

In addition, the Client agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Consultant, its officers, directors, employees and subconsultants (collectively, Consultant) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising out of or in any way connected with the performance of such services by other persons or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to the Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct of the Consultant.

If the Client requests in writing that the Consultant provide any specific field or construction phase services, and if the Consultant agrees in writing to provide such services, then they shall be compensated for as negotiated.



June 4, 2014

WASTEWATER PRE-TREATMENT FACILITY CLOSURE WORKPLAN

Wastewater Pre-Treatment Facility
National Beef California, LP
Brawley, California

1. Purpose:

National Beef California, LP (National Beef) operates a beef slaughterhouse and rendering plant (Plant) located at 57 Shank Road, Brawley (City), California. National Beef has decided to close the Plant and the associated wastewater pretreatment facility (WWPT). This document applies to the closure of the WWPT and is not intended to cover the Plant closure. The purpose of this workplan is to present a technical report and preliminary schedule for the closure of the WWPT in compliance with the following environmental regulations outlined in the Cleanup and Abatement Order (CAO) R7-2014-0033 dated March 20, 2014:

- Closure Requirements contained in Title 27 CCRs commencing with Section 20950 for Pond 1 to the extent feasible
- Porter Cologne Water Quality Control Act (Water Code sections 13000 et seq.) and implementing regulations for the closure of Ponds 2 and 3(a)-(c)
- Regulations applicable to closure of the on-site stormwater retention basins and removal of wastes from all other components of the WWPT

2. Definitions:

- Biochemical oxygen demand (BOD) – A measure of the amount of dissolved oxygen that the waste in a given wastewater depletes from the water, this is used to quantify the strength of the wastewater.
- Cleaning wastewater – Wastewater originating from cleaning in place equipment.
- Effluent – Treated water discharged from a wastewater treatment process.
- Influent – Wastewater entering into a wastewater treatment process.
- Mixed liquor volatile suspended solids (MLVSS) – The microbiological suspension in the aeration tank of an activated-sludge biological wastewater treatment plant.
- Pond liner – Natural geologic materials at pond bottom and sides.
- Process wastewater – Wastewater originating from beef processing.
- Sanitary wastewater – Wastewater originating from toilets, showers, sinks and drinking fountains.
- Sludge – A mixture of settled solids, biosolids (bacterial matter) and chemical precipitates.

3. Sources of Wastewater

The Brawley plant generated wastewater from processing of approximately 2,400 cattle per day. Details on wastewater generation are listed below:

- Wastewater flow going to the WWPT ranged from 700 to 2000 gallons per minute (gpm) with a daily average flow of 1.7 Million Gallons per Day (MGD).
- The WWPT discharged at a maximum rate of 1200 gpm (1.728 MGD) and any influent wastewater flow over this amount is attenuated in the process and discharged on the weekends.

- Domestic wastewater was segregated.
- Review of flow rate trend records for a typical production day (December 11, 2012) show wastewater generation of:
    - Operation 1600 to +2000 gpm (5:30 am to 5:30 pm)
    - Cleaning 1200-1600 gpm (5:30 pm to 12:00 am)
    - Overnight 700-1000 gpm (12:00 am to 5:30 am)

Plant process wastewater is discharged to a separate collection system from plant sanitary wastewater. Process wastewater was generated in kill, refrigeration, boilers, rendering and fabrication operations. The process wastewater was screened and then routed to a wetwell equipped with two centrifugal pumps operated by variable frequency drives. The wetwell pumps routed flow through a flow meter and splitter box, then to two DAF units (DAF 1) to remove the bulk of grease and solids prior to anaerobic treatment.

The following sources of wastewater flowed directly to the anaerobic lagoon (Pond 1) at an estimated total of up to 95,000 gallons per day (gpd) maximum:

- Cooling water used to cool the iron sponge process (sulfur removal from biogas),
- Cattle pen misters (during production only),
- Pen washings (during production only),
- DAF grease refiners stick water (When DAF is operating at optimal conditions)

4. Wastewater Treatment Process History, Design and Operation:

The WWPT, see Figure 1, treated and discharged the wastewater to the City of Brawley publicly owned treatment works (POTW). Under normal operation, flow through the WWPT progressed from beef processing through the following processes in sequential order:

- Screening;
- Two parallel dissolved air floatation units (DAF 1);
- An anaerobic lagoon (Pond 1);
- A single intermediate dissolved air floatation unit (DAF 2);
- An aerobic pond (Pond 2);
- Two clarifying ponds (Ponds 3A and 3B), and
- A suspended air floatation system (SAF).

A reserve pond used for slug load diversion (Pond 3C) is also part of the WWPT together with a belt filter press used to dewater sludge primarily from the SAF.

DAF Treatment

The Plant operates two Pre-Anaerobic DAF units (DAF 1) that receive flow from a wetwell. Float switches control operation of the duplex wetwell pumps. Discharge of the wetwell

pumps is routed through a magnetic flow meter, then a splitter box. The splitter box has two bottom outlets to distribute flow among the two DAF units. The DAF units are installed at different elevations so that series or parallel operation is possible.

Data on the DAF units is listed below:

- Two DAF units, Vanaire, Inc., each 12' by 60 feet (720 ft^2), installed in 2001.
- Design Max surface loading is rated at 4 gpm/ft^2; > 5000 gpm total.
- Design Max solid loading is 5000 mg/L FOG
- Temp out of DAF is 95-105°F

No wastewater treatment chemicals are added before the DAF units. Float from each DAF unit flows to a series of melt tanks, screens, and centrifuges to separate fats from the DAF float to produce tallow. These DAF units also utilize a bottom skimming chain to pull heavy solids and grit continuously from each DAF. Solids are captured and transported with an auger to a grit trailer for offsite disposal.

Pond 1 Anaerobic Lagoon

Pond 1 is a covered anaerobic lagoon operated to convert as much of the BOD in the DAF effluent as possible to biogas, which is used as fuel for a dedicated boiler. The original design documents indicate that this pond is clay lined. The Pond 1 system is shown in Figure 3, details are listed below:

- Pond 1 has been in use for approximately 10 years
- Pond 1 has a design operating volume of 9.5 million gallons (MG).
- Bottom elevation 856 feet
- Design water surface 871 feet.
- Receives gravity flow from a manhole following DAF treatment
- A suction pipe was installed in the west end of Pond 1 in the fall of 2012 and connected to a pump, which routes flow from the mid depth of the pond to a new DAF for treatment before entering aerated Pond 2.
- The new Pond 1 outlet pump is operated at a constant speed (approximately 1200 gpm) and is only shut off when a new truck is needed to accept float and solids from the Pond 1 DAF.
- Pond 1 also serves as a storage and equalization basin to buffer daily influent flow variation due to production during weekdays. The average discharge rate out of Pond 1 is maintained at 1200 gpm. Influent wastewater flow during the week fluctuates, while on the weekend, flow is low and thus Pond 1 will bleed stored process wastewater to the downstream processes on the weekend.
- Average BOD reduction is 65%.

The digester performance is critical to control BOD loadings so that the downstream processes can meet treatment requirements. Pond 1 effluent has contained high grease concentrations in 2012 due to an accumulation of grease over its ten-year lifetime. National Beef investigated the accumulated grease and solids by opening the west discharge area of Pond 1 in early August 2012, and also installed a new effluent pipe at that time. A DAF unit was installed in September 2012 to prevent grease from entering Pond 2 which is discussed later. In February of 2013 National Beef performed another investigation of Pond 1. This investigation collected samples and data from 20 different locations. The data collected included grease and solids levels, pH, temperature, and some alkalinity. In addition, AWS, a dredging contractor, was on site to better understand the dredging needs of Pond 1. The

dredging report is located in Appendix A, along with isometric diagrams of the data collected.

As mentioned above, Pond 1 has a design operating volume of 9.5 MG. This provides a 4 to 7 day detention time, depending on incoming flow and effluent pumping rate. Due to the accumulation of grease in Pond 1, the effective volume of Pond 1 is less than 9.5 MG, resulting in short circuiting and the detention time is less than 4 to 7 days.

Pond 1 Effluent DAF

A 3,000 gpm rated DAF (DAF 2) was installed in September 2012 to prevent grease from entering Pond 2 and this operation appears to be performing satisfactorily. Effluent from Pond 1 flows through the DAF prior to traveling to Pond 2 with an average transfer rate from the DAF of 1,200 gpm. Float from the DAF is sent to a belt filter press (BFP). The current DAF was installed in April 2013 and is a World Water Works unit with the following design parameters:

- Dimensions – approximately 12' W x 30' L
- Flow Capacity is 1500GPM average, 2000GPM Peak
- Influent TSS 1400 mg/l
- Influent FOG 1000 mg/l
- Polymer is being utilized in the DAF.

Pond 2 Aerobic Lagoon

Pond 2 is an aerobic lagoon operated to remove BOD and ammonia. Review of original design documents indicate that this pond is clay lined. The Pond 2 system is shown in Figure 4, details are listed below:

- Pond 2 has been in use for approximately 10 years.
- Design operating volume of 2.9 MG.
- Hydraulic Retention time of 1.7 days at 1.7 MGD
- Influent Loading (at 1.7 MGD) based on data from May 2011 to August 2012
    - Average BOD_5 = 25,249 lb/d
    - Average TKN = 1,946 lb/d
    - Peak BOD_5 = 46,117 lb/d
    - Peak TKN = 2,940 lb/d
- Aeration is supplied by 13 surface aerators, 8 at 40 hp each, and 5 at 75 hp, totaling 695 hp.
- Additional aeration is supplied by 4 Oxiworks floating laterals with 10 fine bubble diffusers per lateral.
- Two blowers (75 HP) rated for 1,400 scfm each, supply air to the laterals.
- Pond 2 is gravity fed from the Pond 1 DAF.
- RAS is introduced at the headworks of Pond 2.
- Pond 2 recycle is pumped from the downstream end of Pond 2 and introduced through four vortex air injectors on the upstream end.

Wastewater treatment performance was evaluated from May 2011 to August 2012. The average pH value was 6.6, which is low for typical nitrification design. pH range during the sample period was 6.3 – 9.0. At a design flow rate of 1.7 MGD, the Soluble BOD_5 loading is 65.1 lbs BOD_5/1,000 cu.ft./d during average loading and 119 lbs BOD/1,000 cu.ft./d during

design maximum loading, which is within the design range. Total oxygen supply including both the surface aerators and diffusers is 662 lbs/hour actual oxygen transfer rate (AOTR).

Pond 3A, Pond 3B (Clarifier), Pond 3C, and SAF

- Pond 3 is 6.2 MG and has been retrofitted into three separate ponds (3A, 3B, and 3C).
- Wastewater flow from Pond 2 flows by gravity to Pond 3A, the main clarifier for the secondary treatment system.
- Flow overflows a weir on one side of Pond 3A into Pond 3B. Pond 3B is pumped to the SAF.
- The Pond 3B effluent pumps are set to discharge at 1.7 MGD (1200 gpm) to a SAF tertiary solids removal system, from which effluent then flows to the City sewer.
- Pond 3A is 60 ft. by 70 ft. The hydraulic loading rate at 1.7 MGD is approximately 400 gpd/sq.ft. in Pond 3A.
- Pond 3B is 60 ft. by 90 ft.
- Pond 3C is not part of the current treatment process. It was dredged of a buildup of solids in the fall of 2012.

Based on HR Green's review of the operation and process data, the return activated sludge (RAS) rate is currently approximately 50% of forward flow. At a plant forward flow rate of 1.7 MGD, a RAS rate of 0.85 MGD, and a MLSS concentration of 4,000 mg/L, solids loading rate to the clarifier would be approximately 20 lbs/sq.ft./day, which is within the typical design range. Pond 3C was out of service for sludge dredging activities, which were completed during the week of December 3, 2012.

5. Pond & Ancillary Equipment Decommissioning:

Plant operations were reduced from 40 hours of cattle processing per week to 32 hours of processing per week through May 23, 2014. This drop in operation resulted in an approximate 6% reduction in flow rate. The flows were not reduced as much as may be expected due to the continuation of high water use cleaning operations.

- Phase 1 - Decommissioning of Pond 3C (began February 2014, duration 5 months, see WWPT Closure Schedule, Table 1, for this and all other phases).
    - Pond 3C is currently 90% empty of wastewater leaving approximately 700,000 gallons in the pond.
    - Decant wastewater in Pond 3C, pump water into Pond 2.
        - Pump wastewater down as far as feasible without removing sludge.
        - Continue to operate Pond 2 and downstream processes to meet effluent limits prior to discharge to City POTW facilities.
    - Follow Sludge Drying and Landfill Plan for residual sludge disposal (described below) - duration 3 months.
    - Follow Pond Liner Excavation and Disposal Plan for liner removal (described below) - duration 2 months.
- Phase 2 – Decommissioning of equipment upstream of Pond 1 and miscellaneous activities (2 months).

- Flows to remain on the order of 1.5-1.7 MGD.
- For duration of Phase 2, continue downstream treatment to meet permit limits for discharge to City POTW facilities.
- Assess residual sludge in Pond 2.
  - Use sludge sampler (Sludge Judge) to sample sludge and determine sludge volume.
  - Test representative samples of sludge for contaminants and solids concentration.
  - Record results for benchmarking progress.
- Rely on recent report establishing sludge depth and fats, oils and greases (FOG) in Pond 1.
  - Test representative sample of FOG for possible reuse or disposal.
  - Seek suitable reuse facility for FOG.
- Clean upstream plant equipment, tanks, channels and piping, and discharge process water to Pond 1 (two weeks commencing from start of cleaning activities).
  - Continue to utilize biodegradable cleaning agents at similar concentrations as current operation so that spent cleaning water can be sent to the City's POTW without exceeding existing permit levels .
- Decommissioning of DAF 1 (one month).
  - Drain water, residual sludge and FOG into Pond 1.
  - Clean DAF, drain cleaning wastewater into Pond 1.
  - Clean piping and drain CIP wastewater into Pond 1.

- Phase 3 – Decommissioning of Pond 2 (begin 14 days after beef processing is terminated, duration 12 months).
  - Stop pumping flow from DAF 2 and Pond 1 to Pond 2.
    - Ensure adequate storage remains in Pond 1 for belt filter press filtrate water that will be generated from dewatering of sludge from Pond 2.
  - Stop pumping Pond 3A return activated sludge (RAS) to Pond 2.
  - Turn off and remove aeration equipment.
  - Use hydraulic dredger to remove sludge from pond bottom and pump to belt filter press (duration 3 months).
    - To minimize odors do not store sludge for more than 24 hours prior to pressing.
    - If odors are a problem add potassium permanganate or other oxidizing agent to the sludge.
    - Pump filtrate back to Pond 1 for further treatment.
    - Send dewatered sludge to landfill.
    - Follow DTSC rules for sludge disposal.
  - Discharge Pond 2 water through SAF to City POTW under existing permit.

        - Allow solids to settle prior to discharge.
    - Follow Sludge Drying and Landfill Plan for residual sludge disposal (described below, duration 6 months).
    - Follow Pond Liner Excavation and Disposal Plan for liner removal (described below), duration 2 months.
- Phase 4 – Decommissioning of equipment downstream of Pond 2 (duration 4 months—July through October 2014).
    - Pump down wastewater in Ponds 3A and 3B into SAF.
        - Continue to discharge to City's POTW facilities in compliance with permitted effluent levels.
    - Pump sludge to belt filter press to reduce sludge volume prior to land filling.
        - Pump filtrate back to Pond 1.
        - Send dewatered sludge to authorized landfill in accordance with applicable regulatory requirements
    - Follow Sludge Drying and Landfill Plan below for residual sludge disposal (described below) - duration 3 months.
    - Follow Pond Liner Excavation and Disposal Plan for liner removal (described below), duration 1 month.
- Phase 5 – Pond 1 wastewater treatment and decommissioning (duration approx. 3 years beginning July 2014)
    - Phase 5A – Recirculation for maximum anaerobic biodegradation (duration 1 – 1.5 years).
        - Isolate Pond 1 by closing valves and plugging pipes to prevent movement of water from upstream or downstream ponds and equipment.
        - Continually recirculate wastewater in Pond 1 to enhance anaerobic digestion and biodegradation prior to opening of the Pond cover in order to avoid nuisance conditions.
            - Install piping to allow valved control of recycled influent to eight different locations within Pond 1.
                - The cover of the anaerobic pond will be maintained in good condition to avoid fugitive emissions from the anaerobic pond.
                - Install orifice with directional control at pipe ends to allow a more focused and controlled spray of the recycled influent.
                - Rotate location of influent addition, and direction of spray to mobilize as much of the settled solids and fats oils and greases (FOG) as possible.
            - Monitoring
                - Monitor biological activity in Pond 1 via biogas flows, pH, temperature, ammonia and BOD on a weekly basis.

        - Biogas shall be monitored and tested quarterly and limited to 400 ppmv before being combusted.
        - Measure sludge levels after 6 months, or if there is a significant decrease in gas production to verify progress.
- Phase 5B – Demolition of gas collection system and remove sludge and FOG from Pond 1 (duration 8 months).
    - Raise pH of Pond 1 to 8 by lime addition prior to opening cover in order to minimize potential for release of odors (e.g., hydrogen sulfide gas) when opening cover.
    - Prior to opening cover expel and combust as much gas as possible.
    - Shut down flare after gas flow is inadequate to run the flare.
    - Remove gas piping system, flare and pond cover on Pond 1 (duration 1 month).
    - Continue odor destruction and masking activities using Chemtreat odorant.
    - Remove FOG from pond 1 (duration 1 month).
        - Dispose of FOG at landfill or suitable reuse facility.
            - Follow DTSC rules for FOG disposal.
    - Use hydraulic dredger to remove sludge from pond bottom and pump to belt filter press (duration 6 months
        - To minimize odors do not store sludge for more than 24 hours prior to pressing.
        - If odors are a problem add potassium permanganate or other oxidizing agent to the sludge.
        - Pump filtrate back to Pond 1 for further treatment.
            - Filtrate likely to contain high BOD, ammonia, and possibly TSS.
- Phase 5C – Aerobic wastewater treatment in Pond 1 (duration 12 months).
    - Continue odor destruction and masking activities using Chemtreat odorant. This will be especially important during start up of aeration equipment.
    - Add aeration and mixing equipment to Pond 1 and deliver oxygen at rates sufficient to avoid nuisance septic conditions.
    - In compliance with APCD Rule 407 observe and remove organic matter that appears on the surface of Pond 1 if it leads to a septic condition.
    - Mix and aerate wastewater in Pond 1 to bring down pollutant levels (duration 4 months).
    - Allow suspended solids to settle.
    - Decant wastewater in Pond 1 and treat with DAF 2 and SAF prior to discharge to City.
    - Continue to meet existing permit levels.

        - Follow Sludge Drying and Landfill Plan for residual sludge disposal (described below, duration 6 months).
        - Follow Pond Liner Excavation and Disposal Plan for liner removal (described below, duration 2 months).
- Phase 6 – Perform final cleaning and removal of DAF 2 and SAF equipment (duration 3 months at the conclusion of Phase 5.C.).
    - Decommission and clean out SAF.
    - Clean and close belt filter press, DAF 2, pumps, piping and any other remaining equipment.
    - Comply with APCD rules 801, 803 and 805 to minimize particulate matter emission as a result of excavation and hauling.
        - Spray lightly with water to minimize dust during earth moving activities.
    - Repeat testing and excavation and landfilling as required.

6. <u>Sludge Drying and Landfill Plan (see references to this plan above)</u>

- This plan applies to Ponds 1, 2, 3A, 3B and 3C upon completion of dewatering of each.
- After as much water has been removed from each impoundment by decanting or other means, the residual sludge will undergo solar evaporation.
- After a dry crust is established on the top three inches of the residual sludge, the sludge to be turned over mechanically.
- Turned sludge will undergo further solar evaporation so that the next top three inches are a dry crust.
- Excavate the top three inches of solids, test solids as required by disposal facility, and dispose of at a landfill.
- Comply with APCD rules 801, 803 and 805 to minimize particulate matter emission as a result of excavation and sludge hauling.
    - Spray with water to minimize dust during earth and sludge moving activities.
- Repeat drying and excavation until all sludge is removed.

7. <u>Wastewater Pond Liner Excavation and Disposal Plan (see references to this plan above)</u>

- Perform pond bottom soils testing in 3 inch lifts.
- Excavate and landfill 3 inches of soil.
- Comply with APCD rules 801, 803 and 805 to minimize particulate matter emission as a result of excavation and hauling.
    - Spray with water to minimize dust during earth moving activities.
- Repeat testing and excavation as required for complete removal of contaminated liner.

8. Wastewater Ponds Nuisance Prevention

- Upon completion of sections 1 through 7, conduct a geotechnical investigation to determine the infiltration rate of each pond bottom. If the investigation concludes that the ponds will not naturally drain sufficiently to prevent nuisance conditions design solutions will be evaluated at that time.

9. Groundwater Monitoring Plan

- The groundwater quality baseline was established during the Groundwater Study (see HR Green Groundwater Study dated 9/26/13).
- Groundwater samples will be collected from one background well (MW-1) and three down gradient monitoring wells (MW-2 MW-3, and MW-4), each located adjacent to a separate pond (Figure 1).
- Groundwater and pond water samples will be collected annually during the month of September, and continue until 1 year following clean closure.
- Prior to dewatering, water samples will also be collected from the 3 ponds comprising the wastewater pre-treatment system (Ponds 1, 2, and 3(a)-(c)). Pond 1 will initially be covered so sample (P1) will be collected from a valve in the piping extending from Pond 1 to DAF 2. Ponds 2 and 3 are uncovered so their samples will be collected at the edge of the water using a bailer. Once ponds are empty of water no water sample will be taken from it. Samples from the groundwater will be compared to the samples from the ponds.
- Wastewater parameters anticipated to be present in the pre-treatment system will be tested for and include pH, BOD, fecal coliforms, total petroleum hydrocarbons (TPH), oil and grease, total phosphorous, ammonia-N, nitrate-N, and nitrite-N.
- National Beef provided a comprehensive chemical inventory of all chemicals that have a connection or pathway to the wastewater pre-treatment system. Most commercial chemicals listed in the inventory cannot be analyzed directly by the laboratory so associated MSDS sheets were used to develop a comprehensive list of parameters (i.e., disassociated elements) that will manifest in water and provide a basis for evaluating whether groundwater impact is present, these indicator parameters (including fluoride, sulfate, TDS, chloride, calcium, sodium and potassium) will be tested in the sampling analysis. This method and groundwater quality baseline were established during the Groundwater Study (see HR Green Groundwater Study dated 9/26/13).
- Existing wells not identified above will be plugged and abandoned in accordance with state rules.
- After completion of all groundwater monitoring activities the remaining wells will be plugged and abandoned in accordance with state rules.

10. Closure of 2 Stormwater Retention Basins

- The two stormwater retention basins (see Figure 1 and SPCC Map) located on the north portion of the National Beef site attenuate onsite storm water drainage caused by the addition of impervious site buildings and paved areas. These basins are not related to the site wastewater pretreatment facilities discussed in this report. Due to downstream effects of filling the stormwater retention basins we recommend that they remain in place. This action will protect downstream properties and roads.

- Perform the following activities outside of summer stormwater season, after completion of all other elements described in this report (duration 1 month).
    - As a precautionary measure National Beef will perform pond bottom soils testing to 3 inches below grade of pond bottoms.
    - Pending results of soil testing, landfill the top 3 inches of soil if necessary.

11. Final Clean-Closure Documentation

- Complete a Pond Decommissioning Report providing the results of the pond closure activities.
    - Record drawings for sludge and liner removal.
- Following a successful clean-close the former WWPT is no longer subject to the SWRCB-promulgated requirements of Title 27, Division 2.
- Submittal of a Notice of Termination (NOT) of the General Industrial Stormwater Permit (if applicable) to the RWQCB.

12. Continuing Activities

- Groundwater monitoring for duration described in the Groundwater Monitoring Plan above.
- Continue monitoring of former wastewater pond area to prevent nuisance conditions from developing.

HRGreen

FACILITY SITE PLAN
NATIONAL BEEF
BRAWLEY, CALIFORNIA

Date: 05/20/2014
Project #: 20120063.21

N
0 200 Feet
1 in = 200 ft

FIGURE 1

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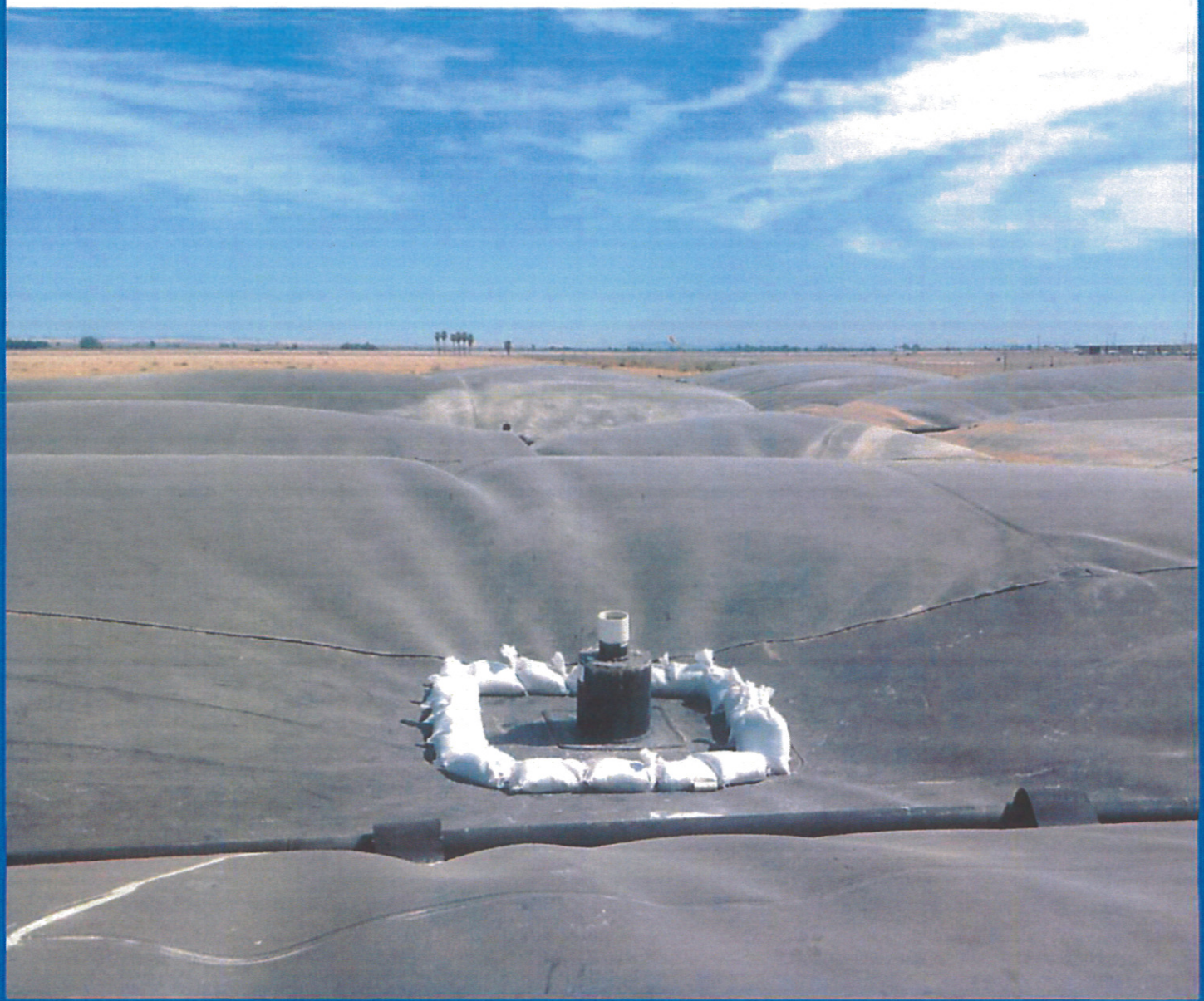
Appendix A

Pond 1 Dredging Report and Isometric Diagrams

National Beef®
BRAWLEY,CA.

February 16-17, 2013

Brawley Pond 1 Profile
Covered Anaerobic Lagoon
Total of 20 Sample Points
Profile Measurements Of 10 North Sample Points
Profile Measurements Of 10 South Sample Points

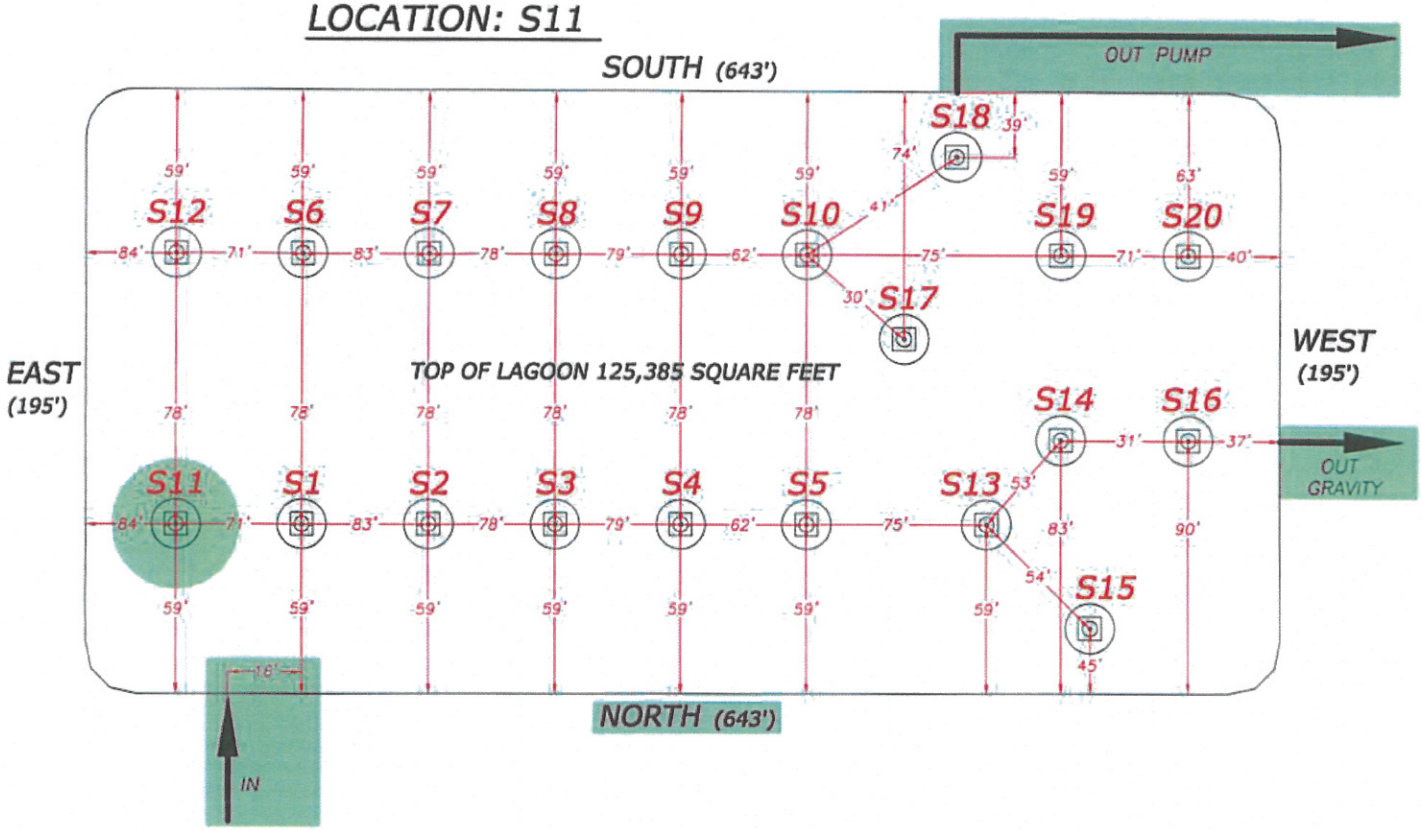


BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

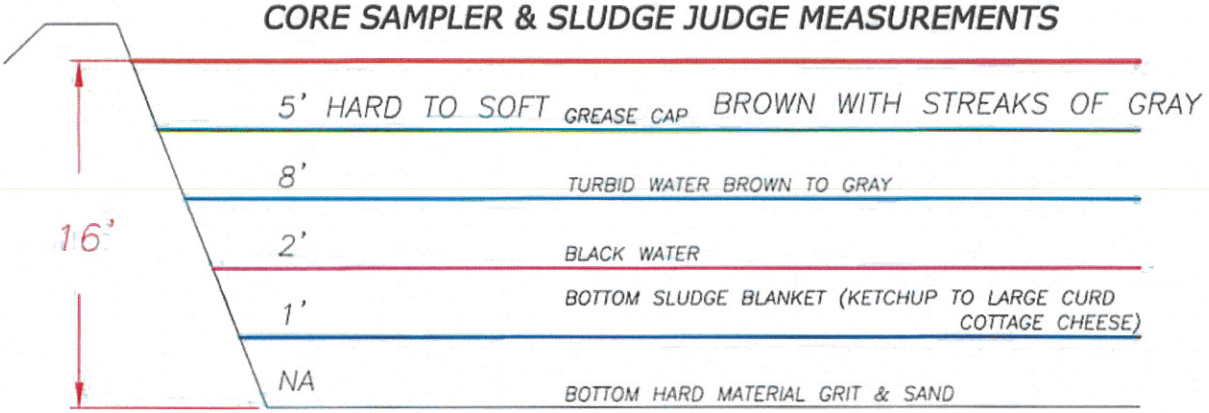
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S11



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	NA	NA
6 FT.	96.8	7.32
9 FT.	93.2	7.36
12 FT.	95.9	7.34
15 FT.	NA	NA

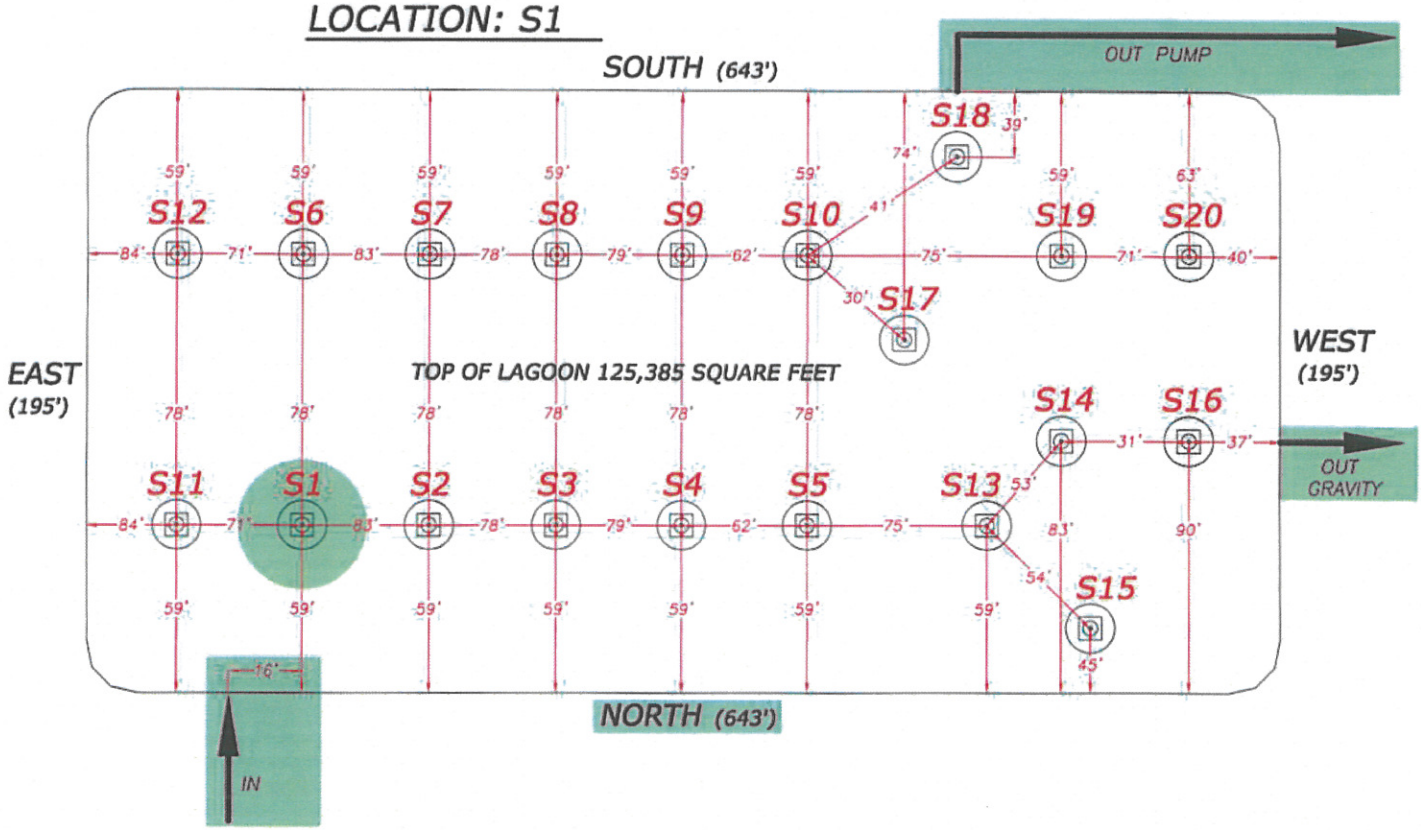
CAD/BRAWLEY/BRAWLEY PLANT DISCHARGE/BRAWLEY ANAEROBIC LAGOON PROFILING 2 16-17 13/S 11 NORTH

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

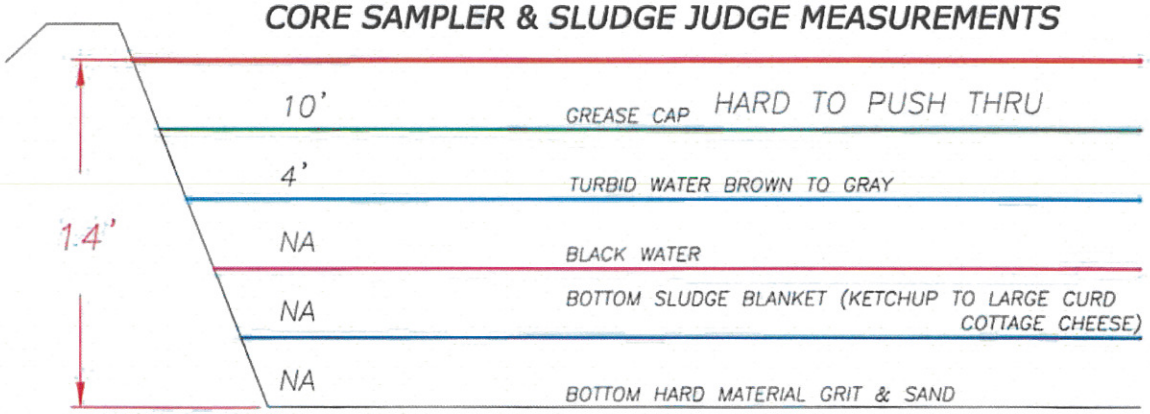
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S1



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	NA	NA
6 FT.	81.9	7.46
9 FT.	84.7	7.46
12 FT.	86.7	7.52
15 FT.	NA	NA

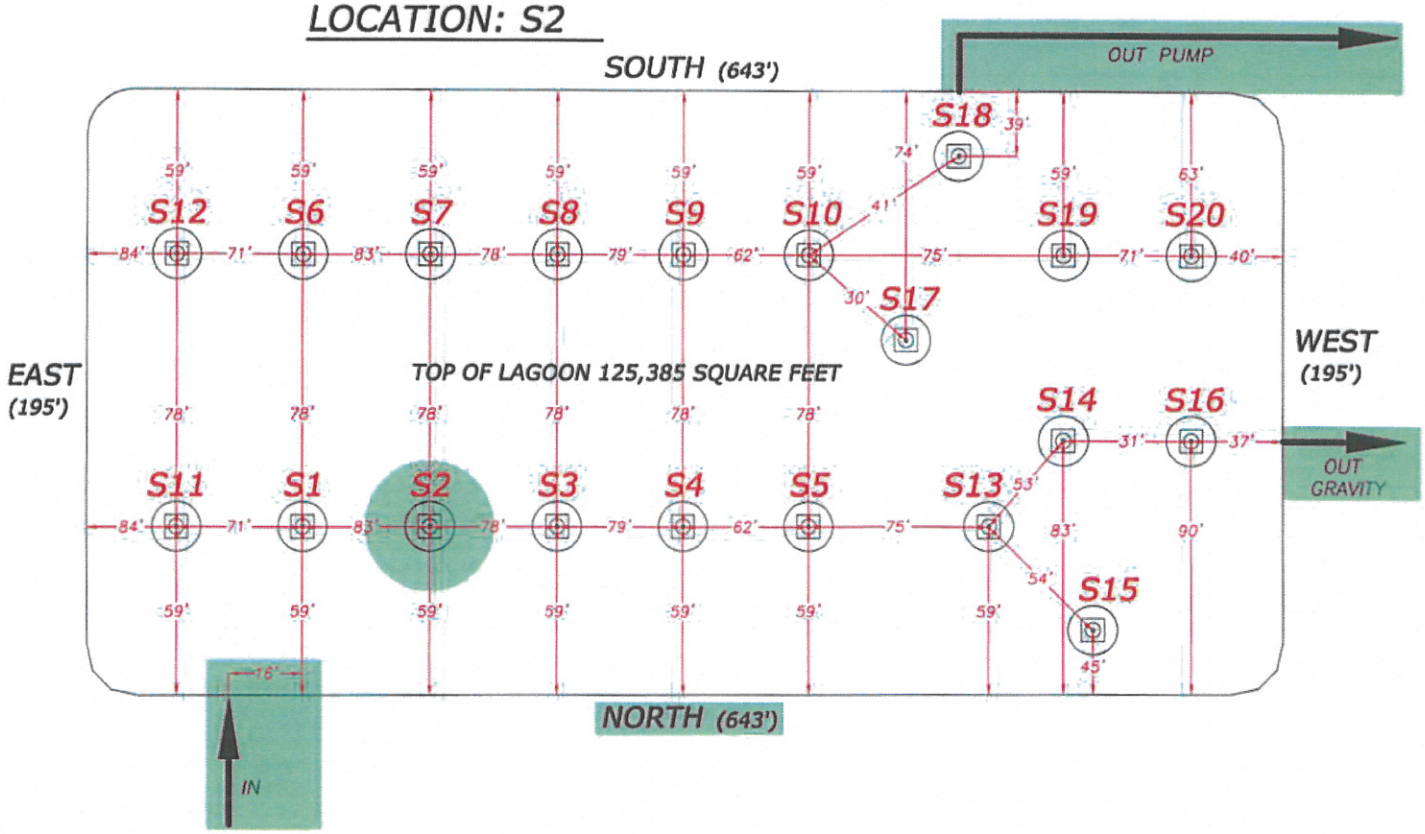
CAD/BRAWLEY/BRAWLEY PLANT DISCHARGE/BRAWLEY ANAEROBIC LAGOON PROFILING 2 16-17 13/S 1 NORTH

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

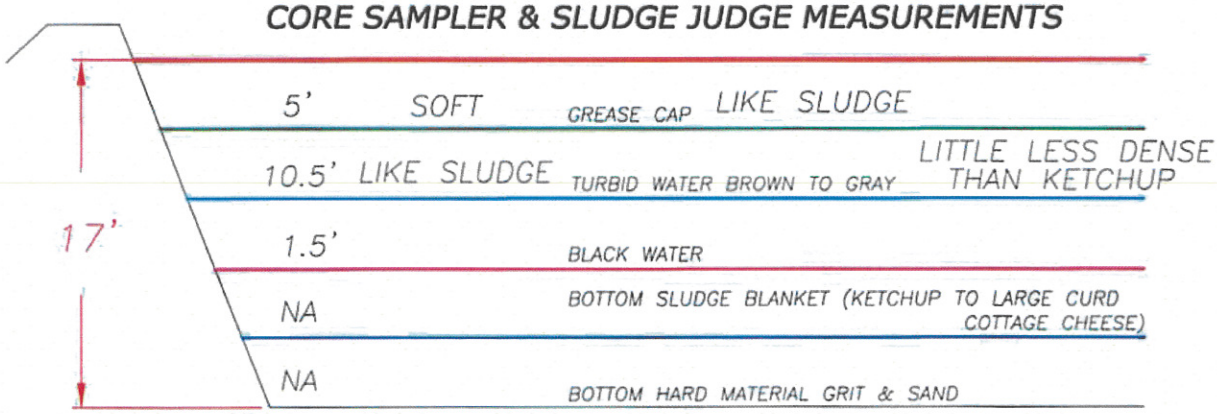
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S2



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	NA	NA
6 FT.	NA	NA
9 FT.	NA	NA
12 FT.	NA	NA
15 FT.	NA	NA

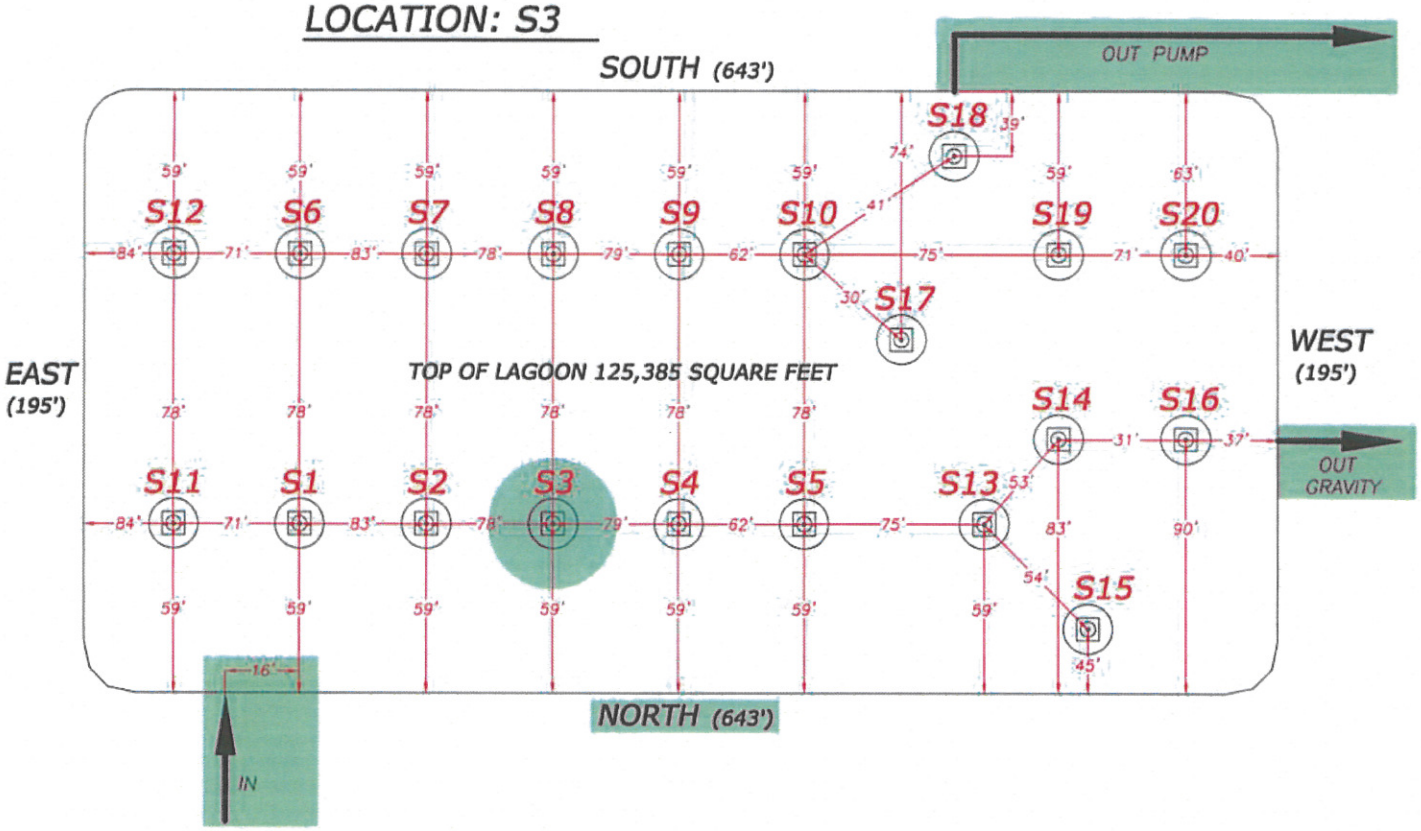
CAD/BRAWLEY/BRAWLEY PLANT DISCHARGE/BRAWLEY ANAEROBIC LAGOON PROFILING 2 16-17 13/S 2 NORTH

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

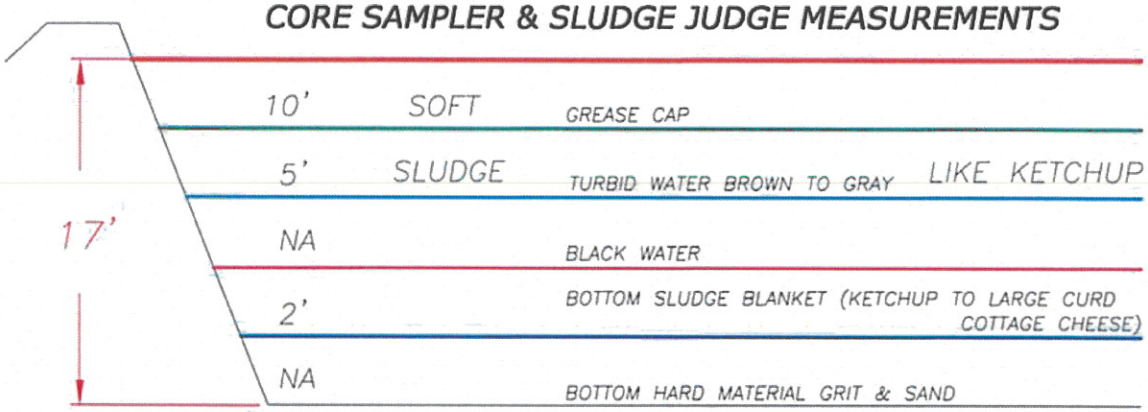
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S3



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	77.6	7.42
6 FT.	NA	NA
9 FT.	NA	NA
12 FT.	NA	NA
15 FT.	NA	NA

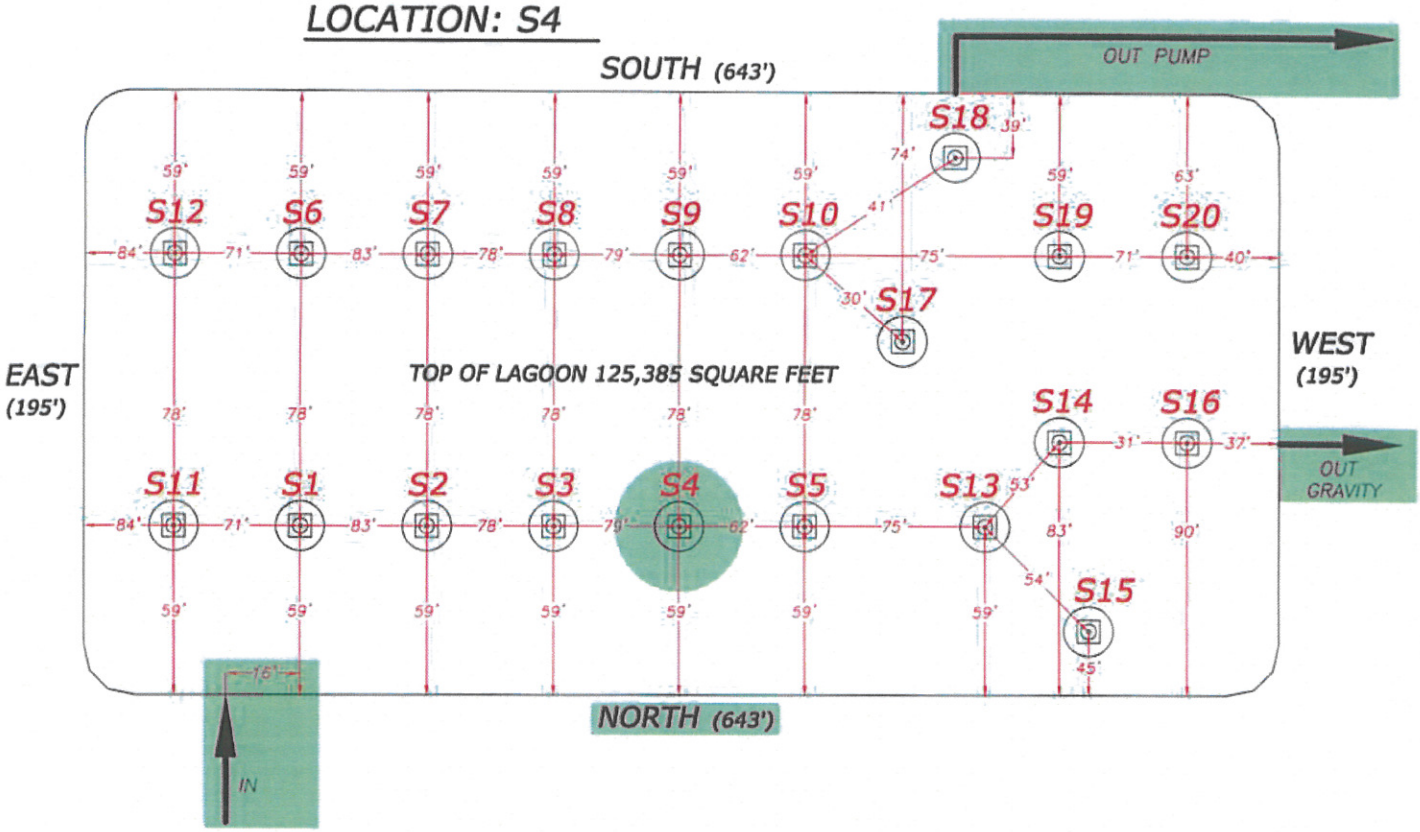
CAD/BRAWLEY/BRAWLEY PLANT DISCHARGE/BRAWLEY ANAEROBIC LAGOON PROFILING 2 16-17 13/S 3 NORTH

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

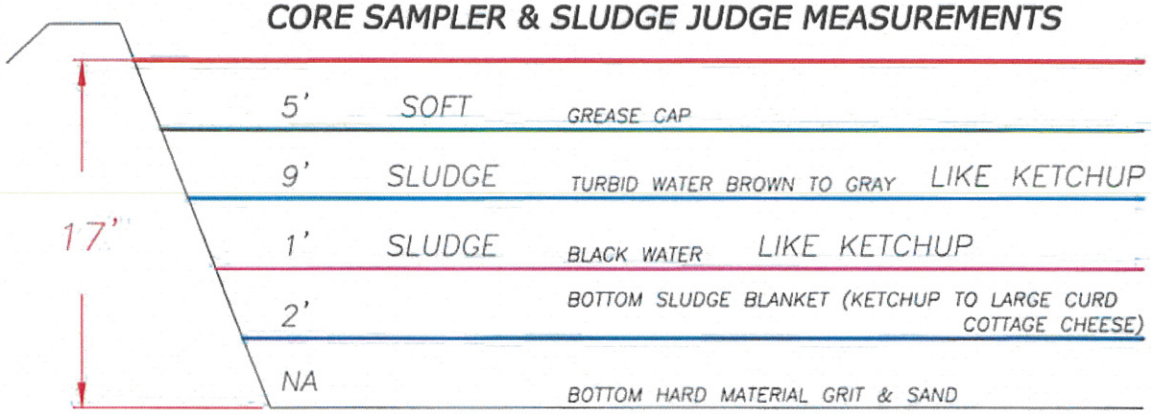
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S4



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	NA	NA
6 FT.	83.3	7.36
9 FT.	82.1	7.42
12 FT.	82.7	7.39
15 FT.	NA	NA

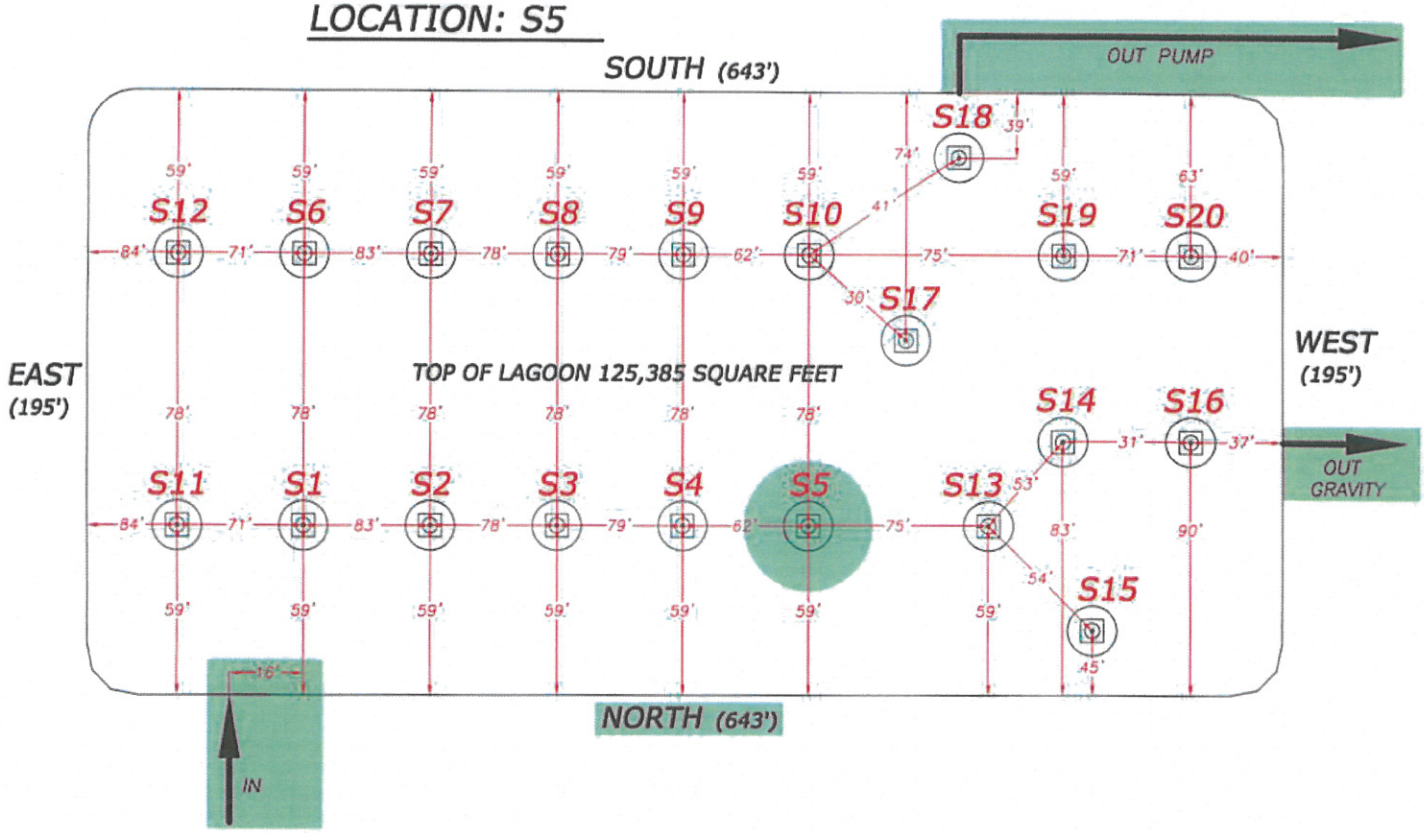
CAD/BRAWLEY/BRAWLEY PLANT DISCHARGE/BRAWLEY ANAEROBIC LAGOON PROFILING 2 16-17 13/S 4 NORTH

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

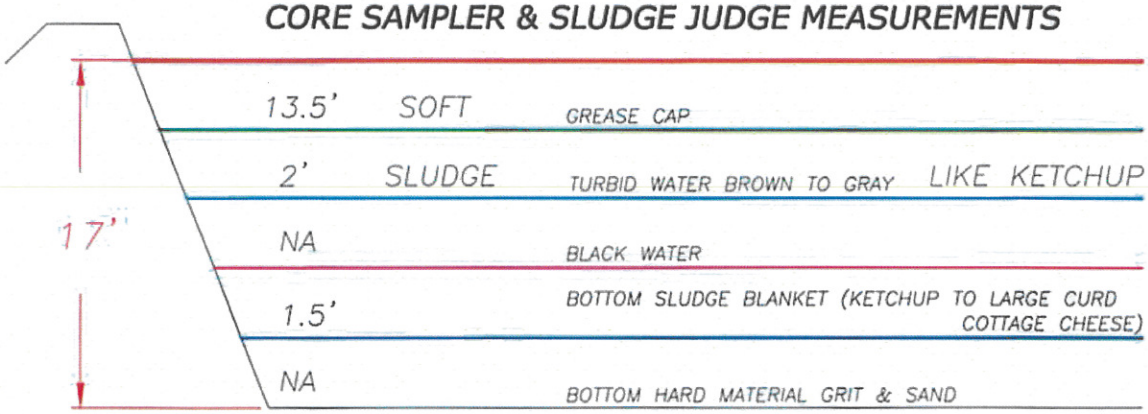
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S5



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



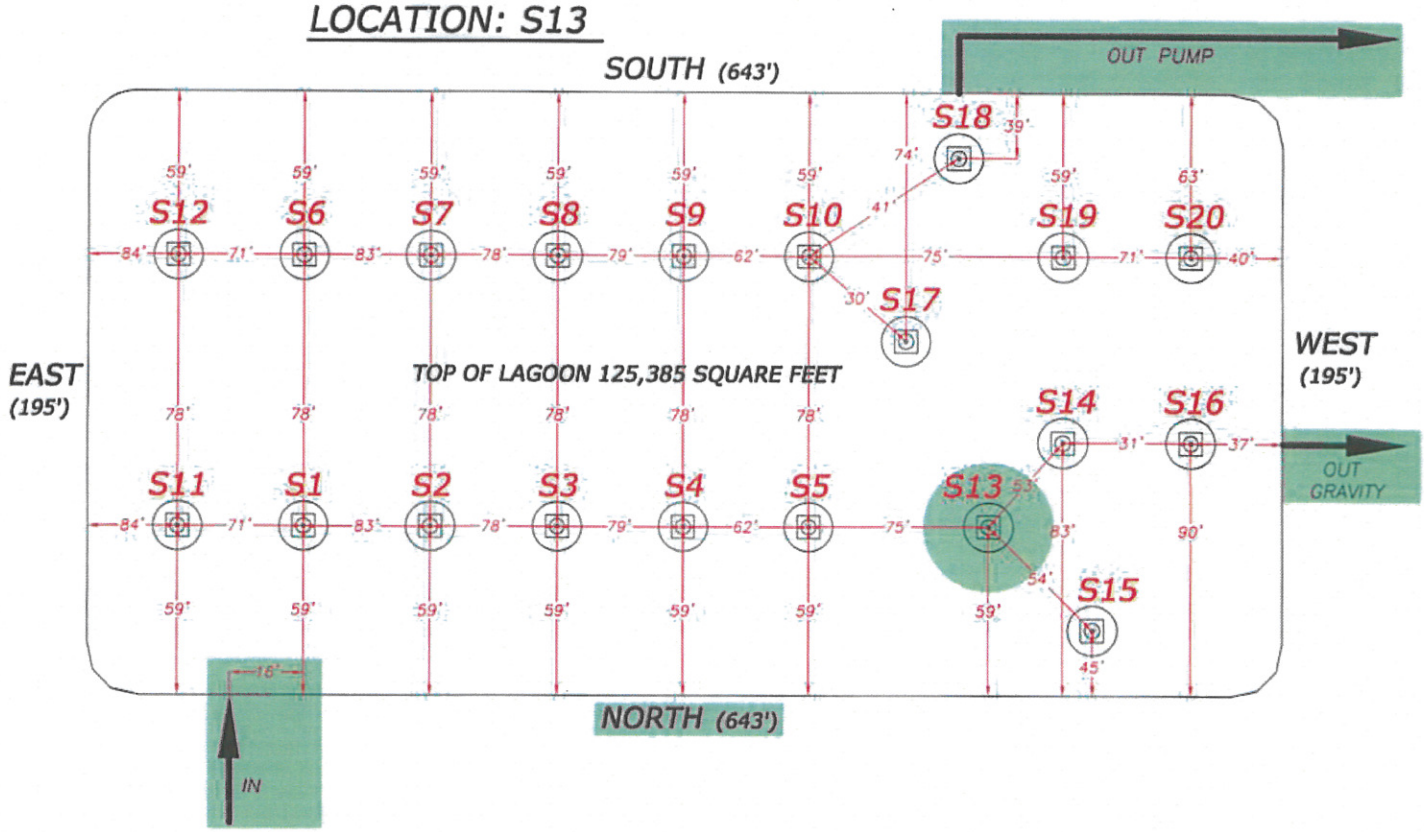
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	75.6	7.39
6 FT.	78.2	7.40
9 FT.	79.2	7.39
12 FT.	79.8	7.38
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

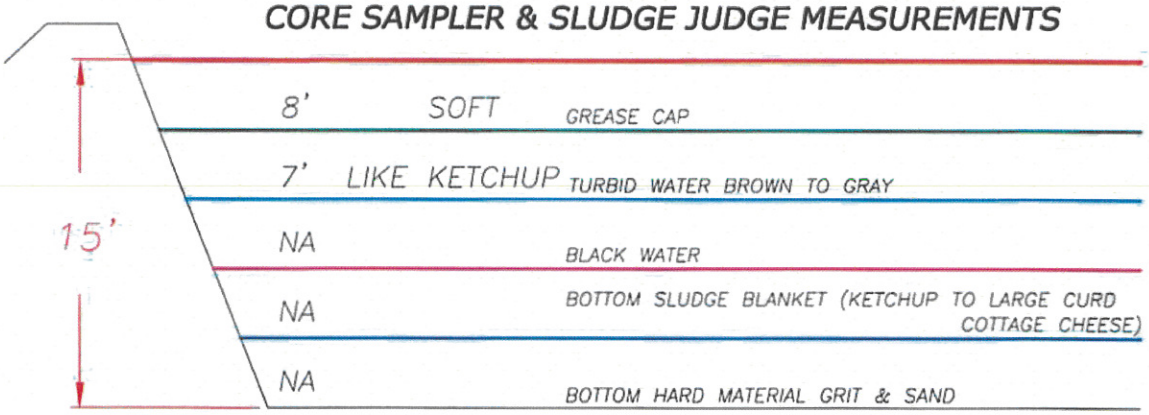
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S13



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



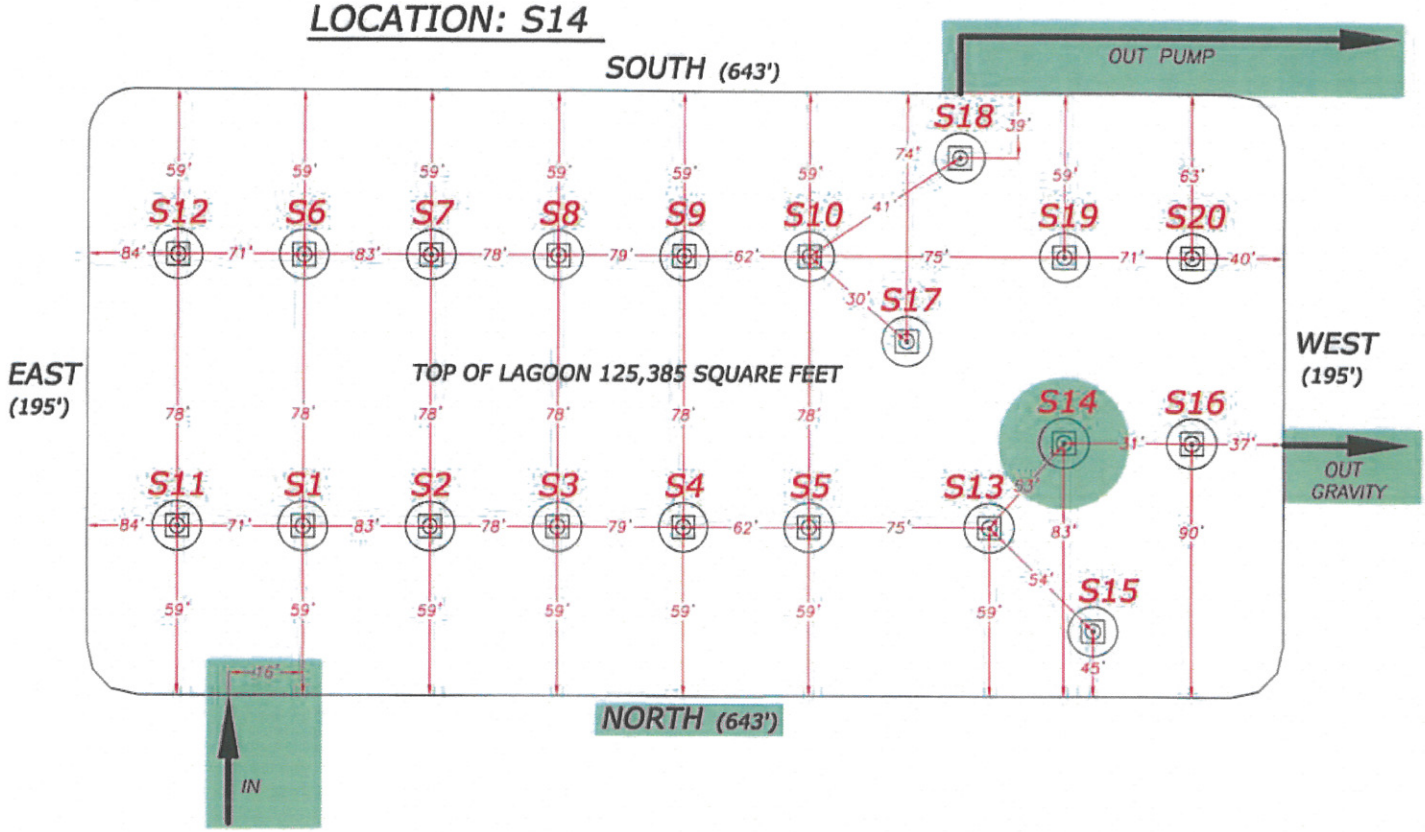
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	71.6	7.25
6 FT.	72.0	7.26
9 FT.	72.4	7.26
12 FT.	72.7	7.26
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

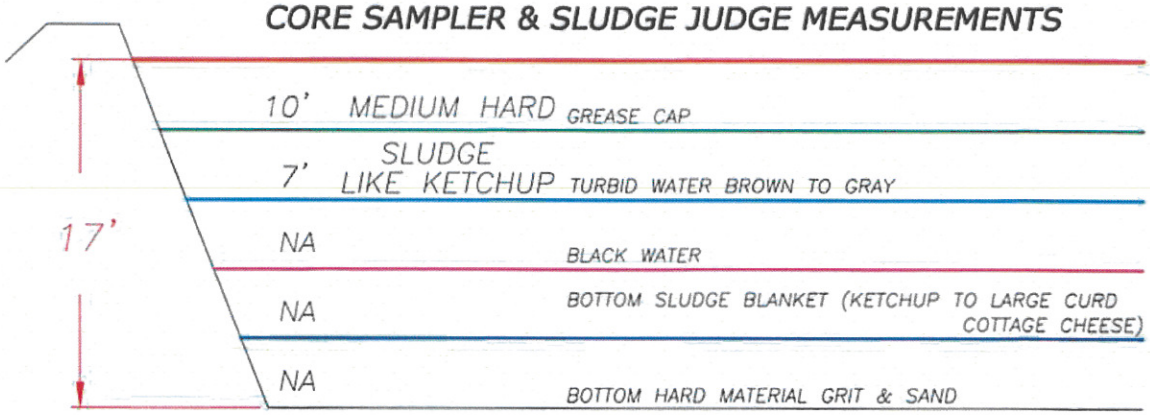
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S14



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	71.9	7.20
6 FT.	72.5	7.20
9 FT.	72.8	7.19
12 FT.	73.1	7.19
15 FT.	NA	NA

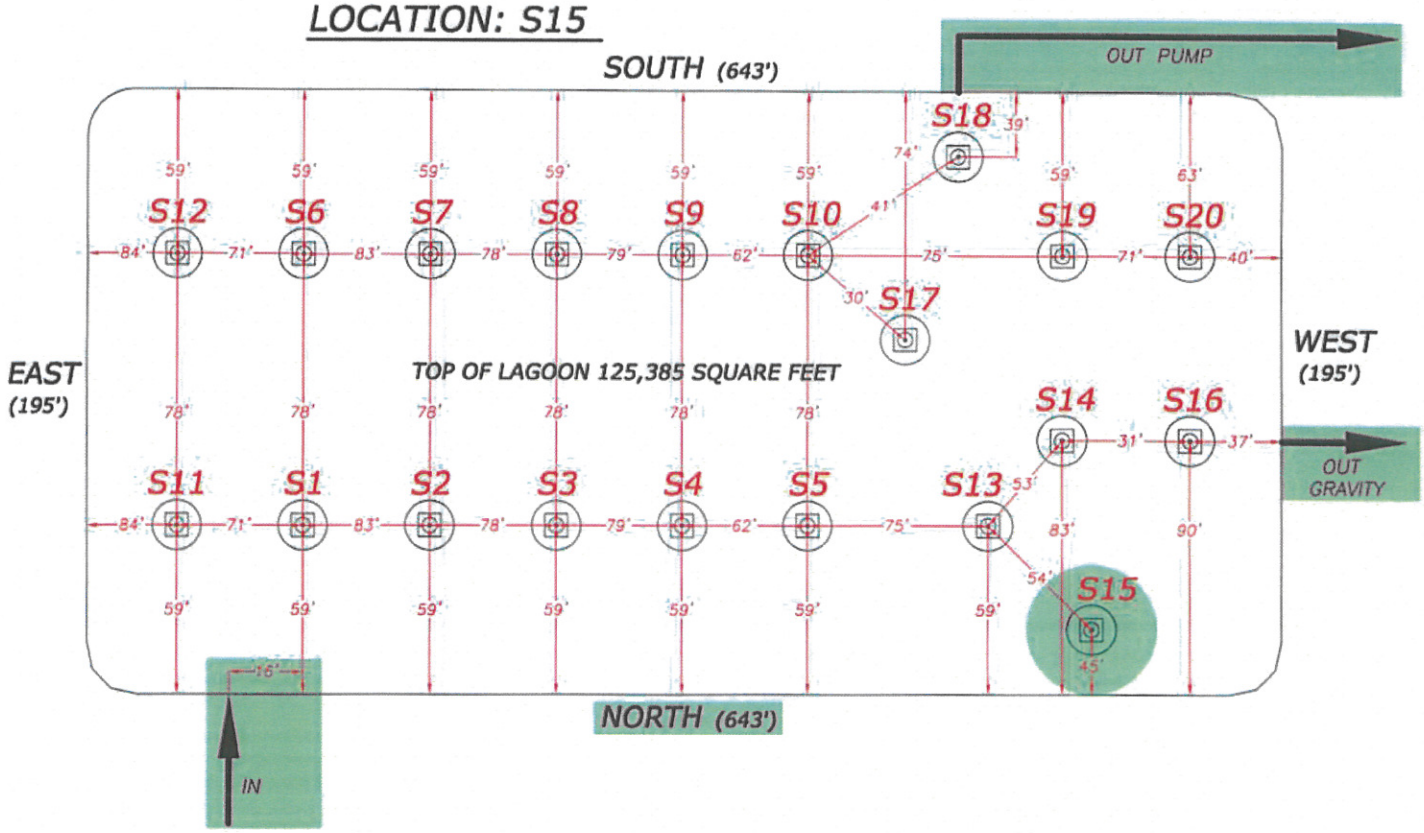
CAD/BRAWLEY/BRAWLEY PLANT DISCHARGE/BRAWLEY ANAEROBIC LAGOON PROFILING 2 16-17 13/S 14 NORTH

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

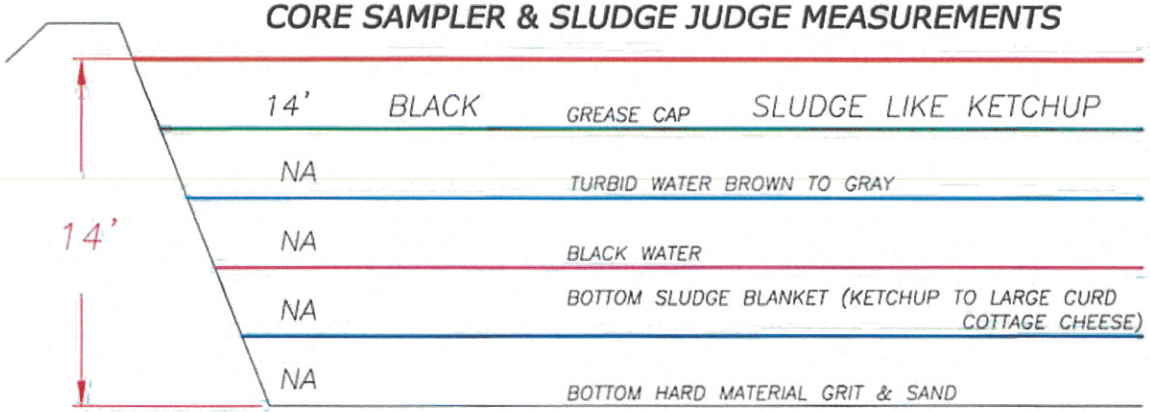
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S15



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	70.8	7.21
6 FT.	71.0	7.20
9 FT.	71.1	7.20
12 FT.	71.2	7.21
15 FT.	NA	NA

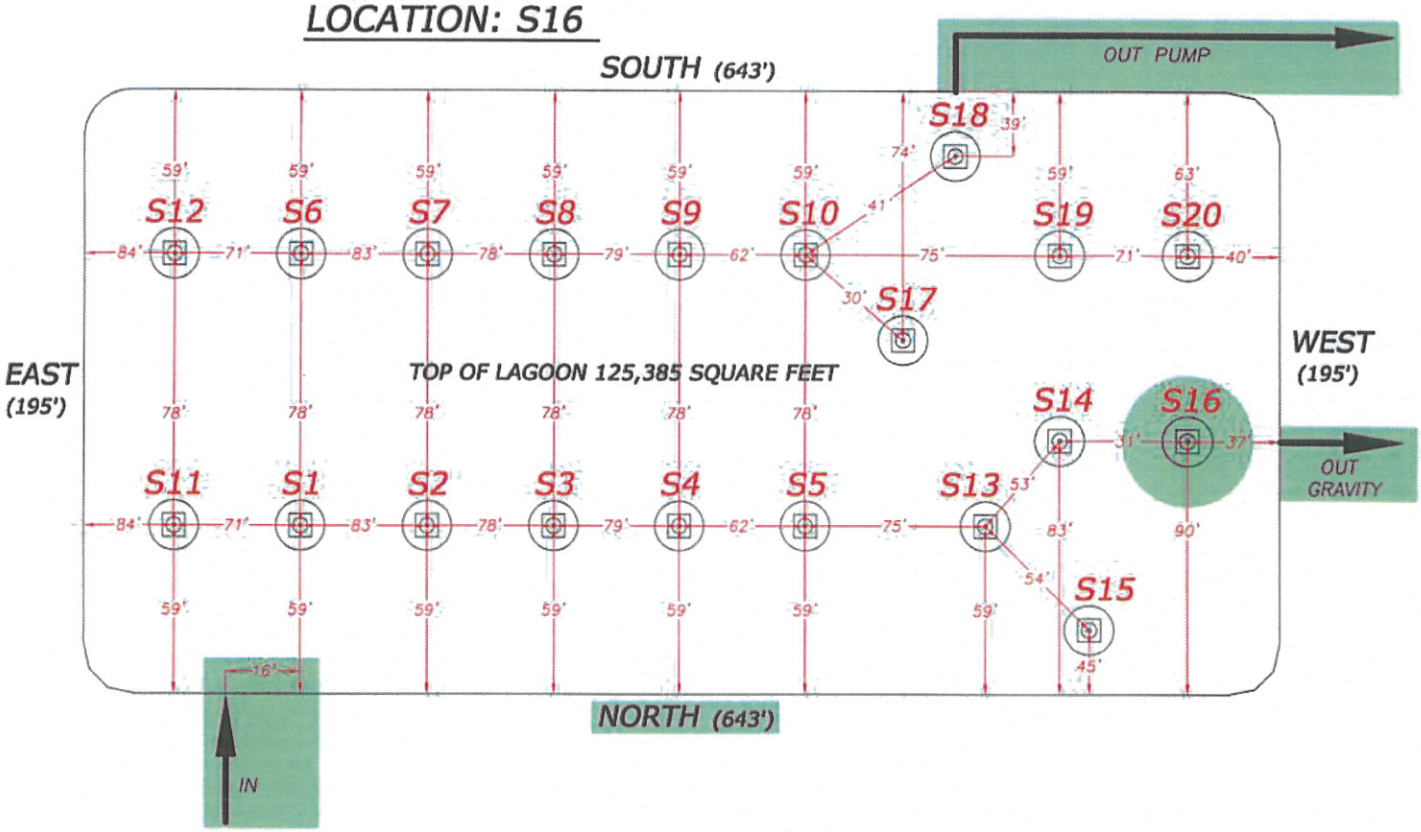
CAD/BRAWLEY/BRAWLEY PLANT DISCHARGE/BRAWLEY ANAEROBIC LAGOON PROFILING 2 16-17 13/S 15 NORTH

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

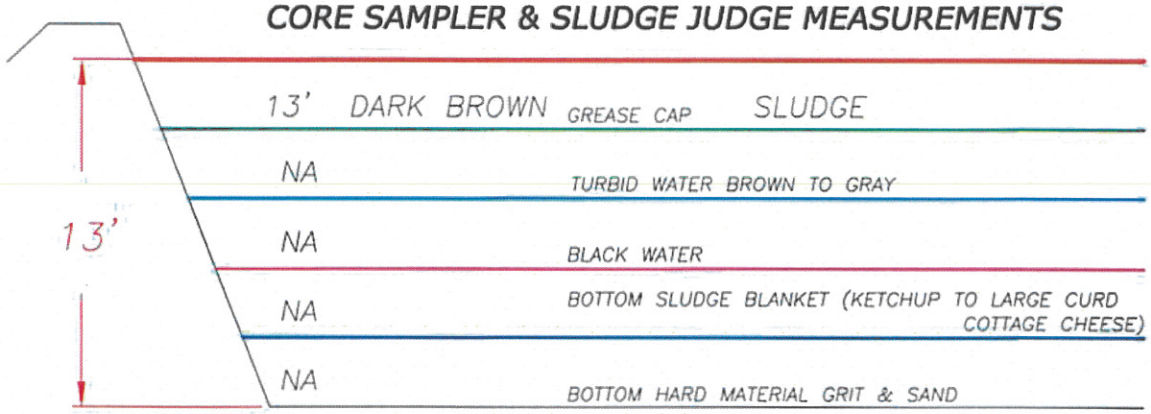
SAMPLE POINT LOCATION PROFILE

DATE:2-16-13

LOCATION: S16



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



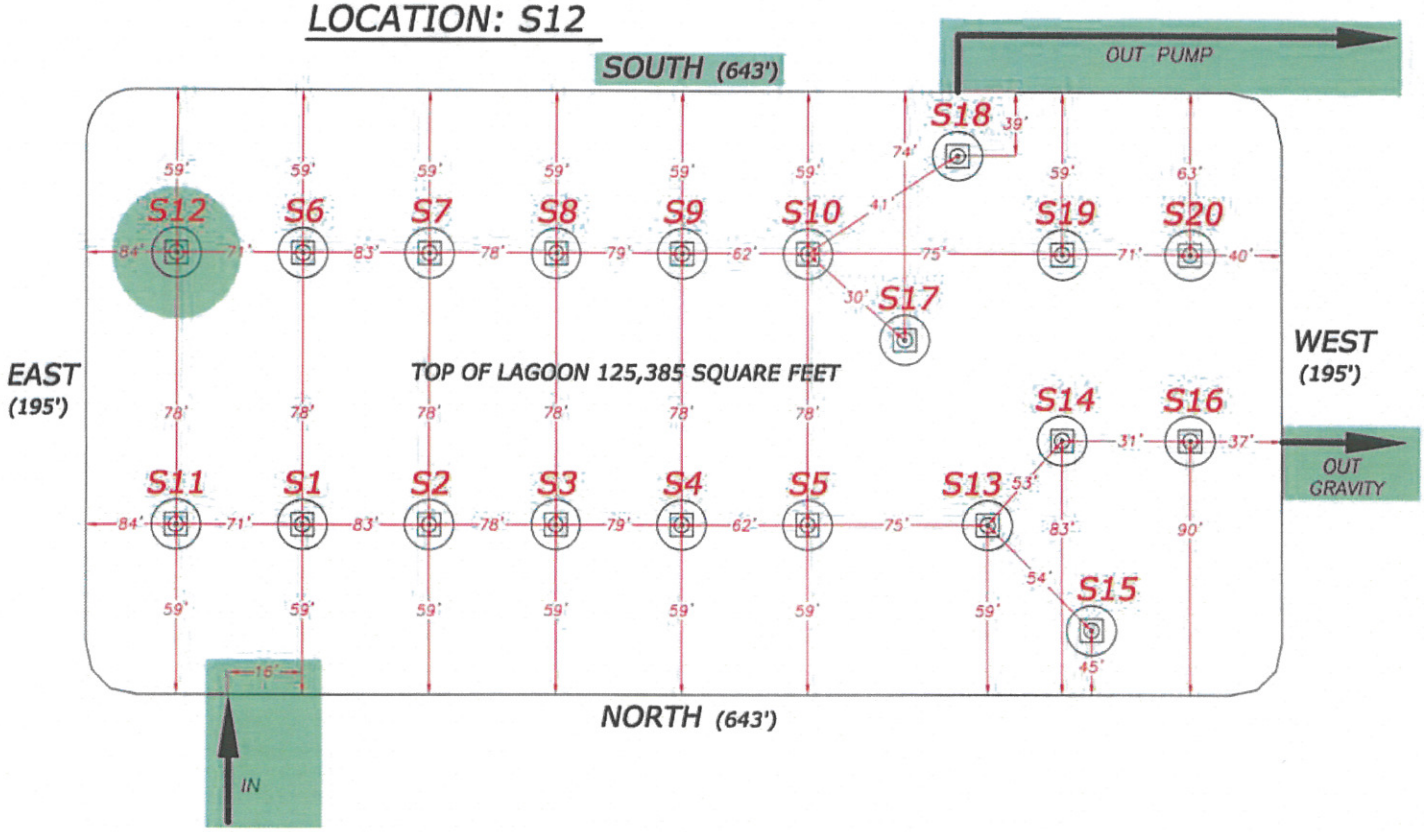
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	63.6	7.25
6 FT.	64.6	7.27
9 FT.	65.4	7.27
12 FT.	66.0	7.27
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

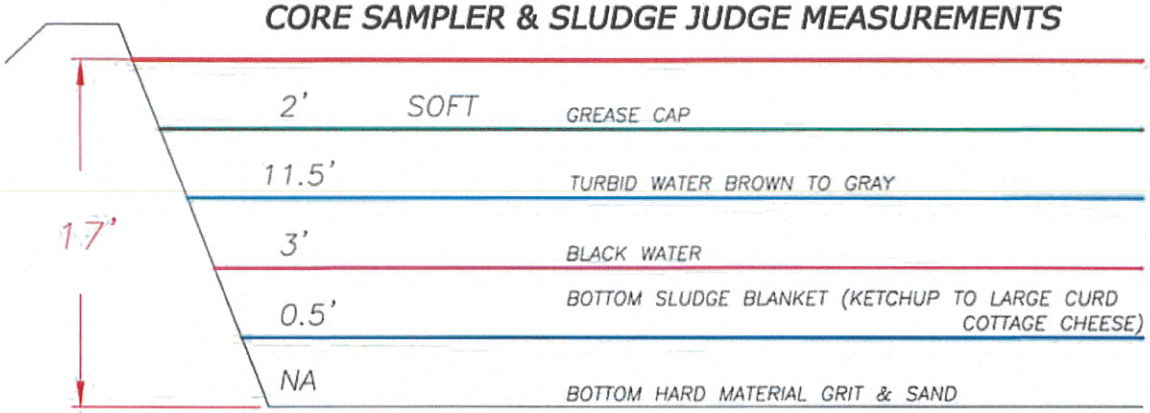
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

LOCATION: S12



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	75.5	7.02
6 FT.	74.8	7.05
9 FT.	76.1	7.07
12 FT.	77.3	7.07
15 FT.	NA	NA

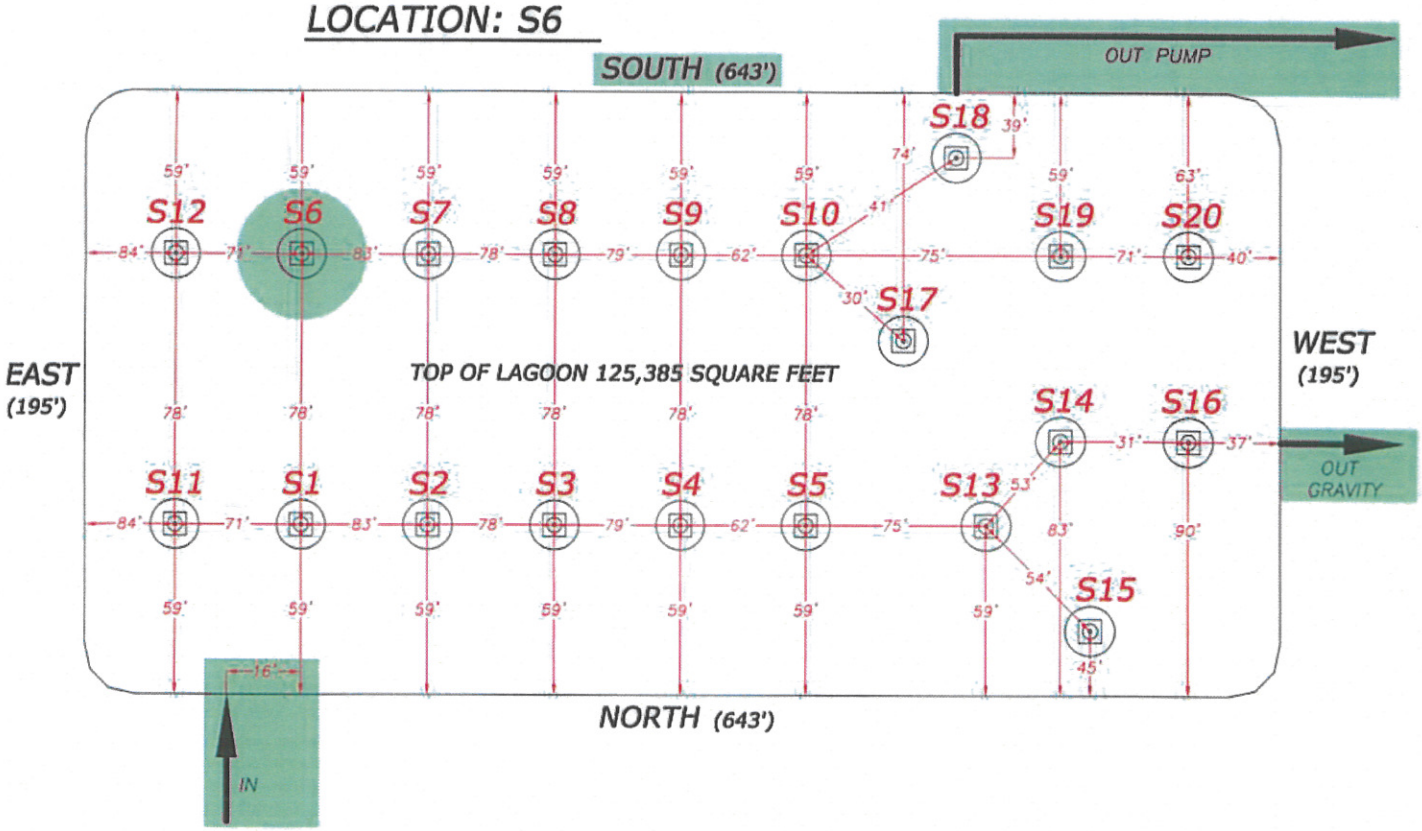
CAD/BRAWLEY/BRAWLEY PLANT DISCHARGE/BRAWLEY ANAEROBIC LAGOON PROFILING 2 16-17 13/S 12 SOUTH

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

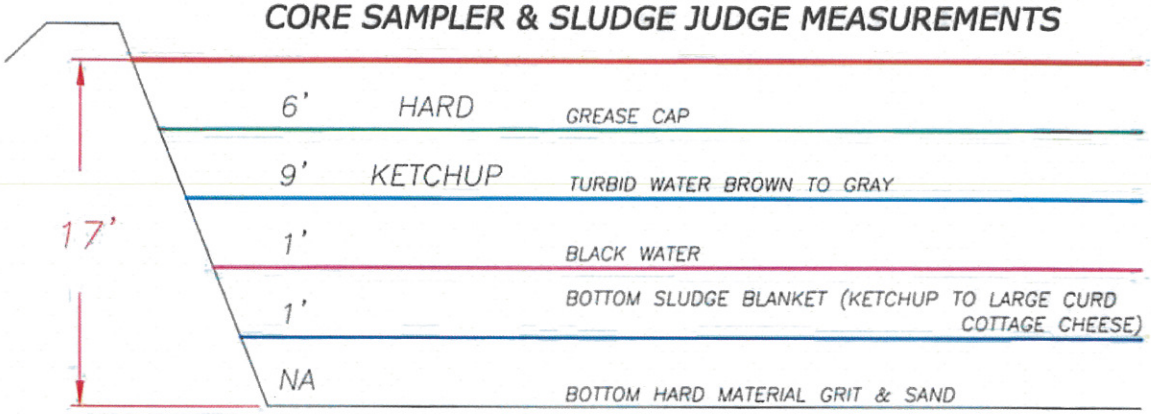
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

LOCATION: S6



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



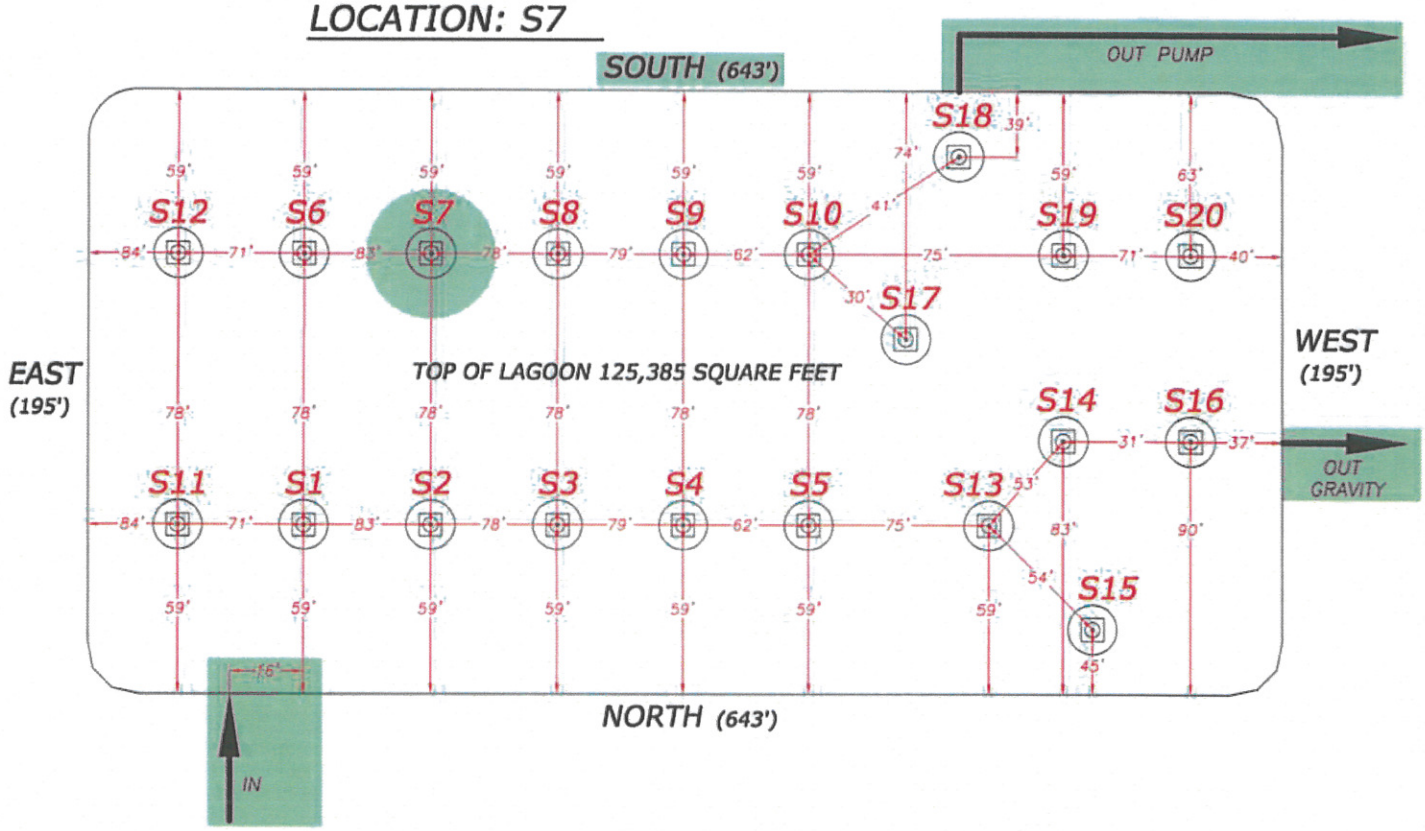
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	NA	NA
6 FT.	NA	NA
9 FT.	NA	NA
12 FT.	NA	NA
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

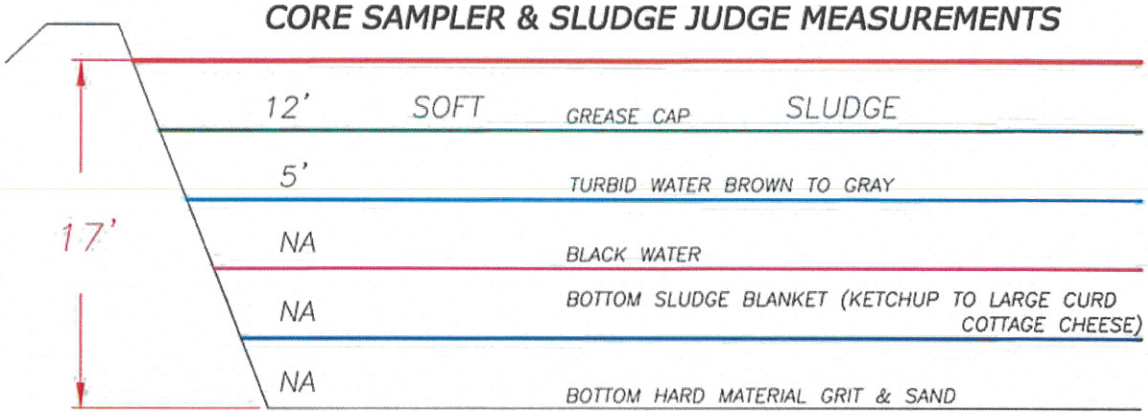
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

LOCATION: S7



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



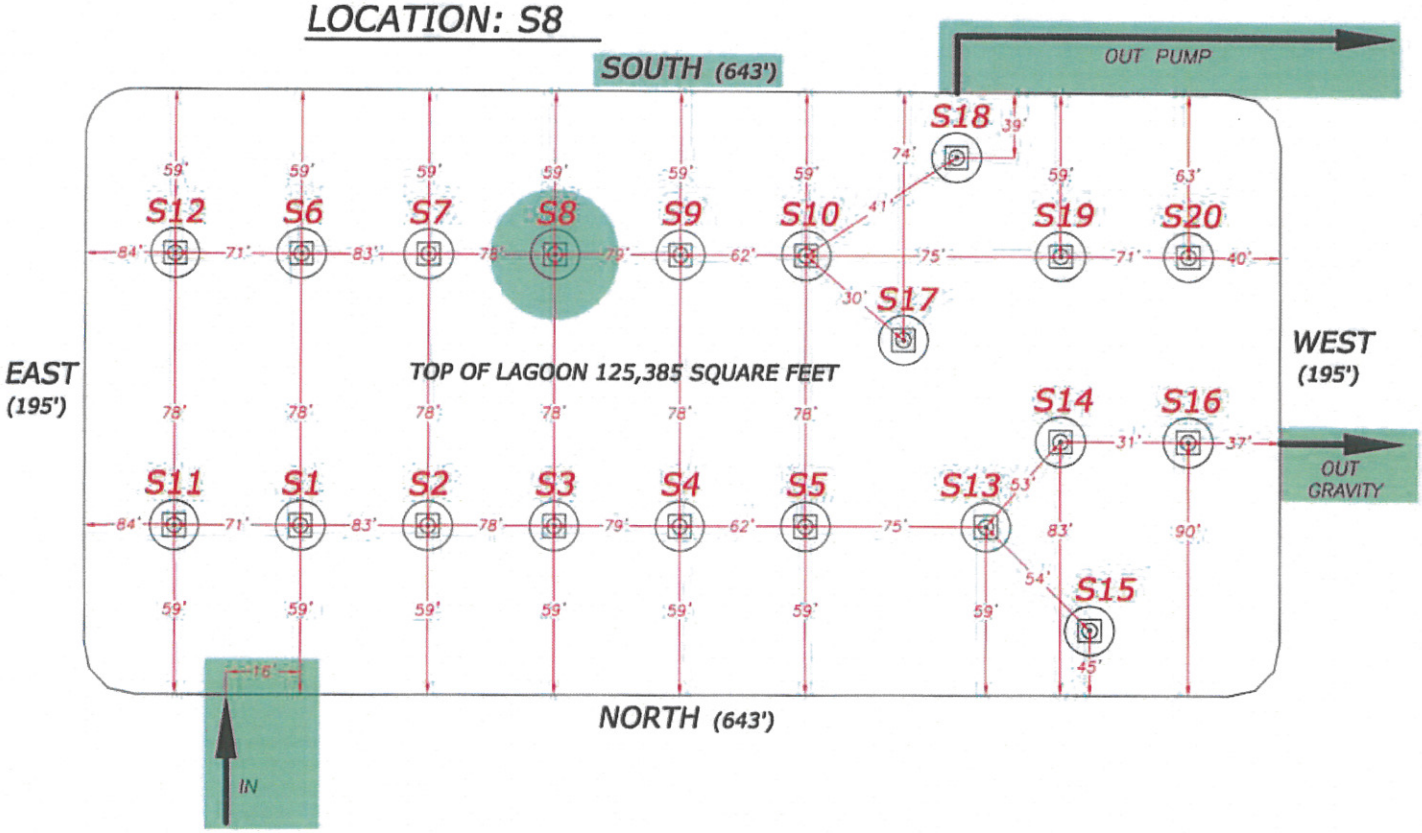
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	69.5	7.04
6 FT.	72.8	7.06
9 FT.	74.5	7.05
12 FT.	75.8	7.03
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

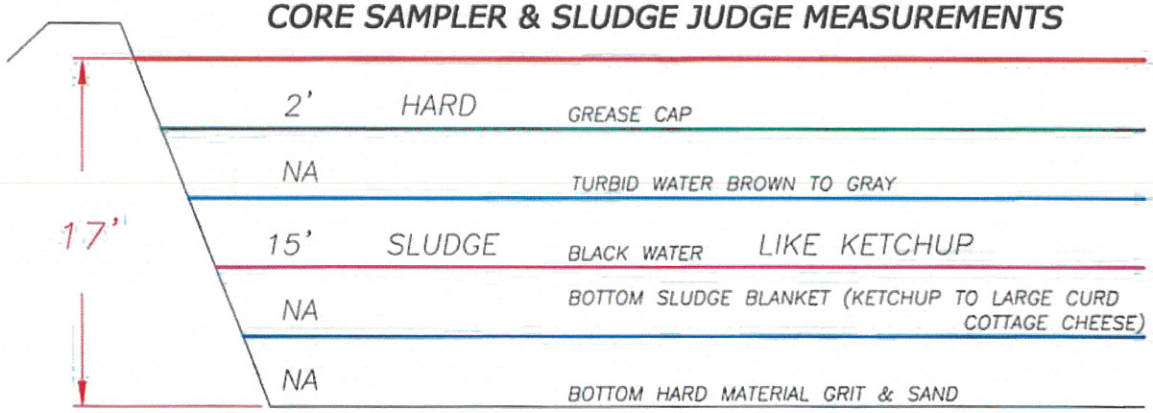
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

LOCATION: S8



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



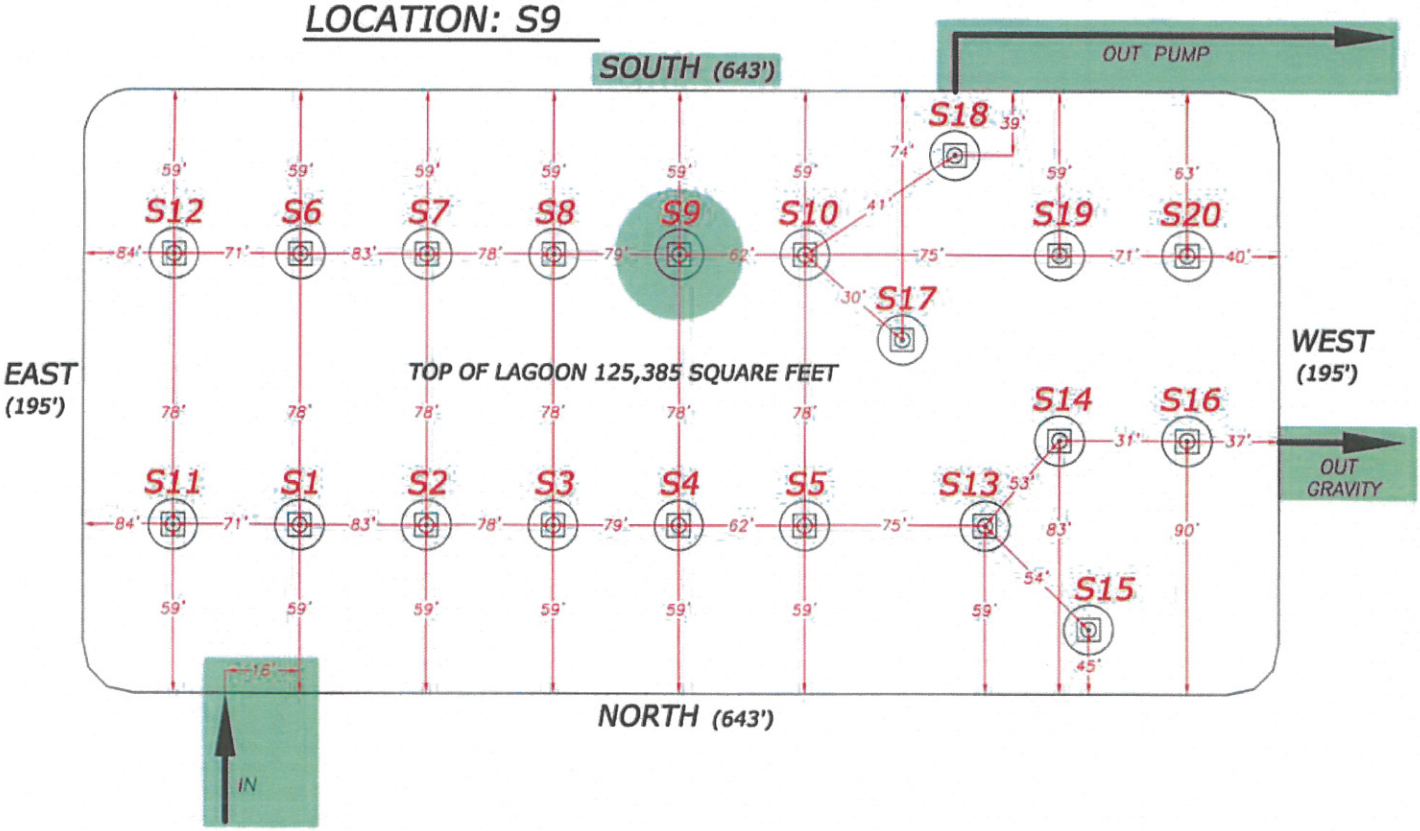
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	NA	NA
6 FT.	NA	NA
9 FT.	NA	NA
12 FT.	NA	NA
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

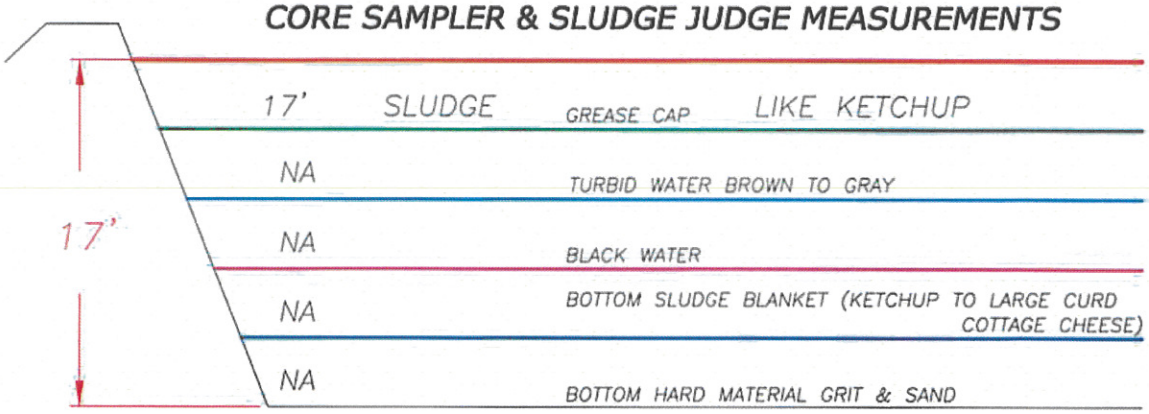
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

LOCATION: S9



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



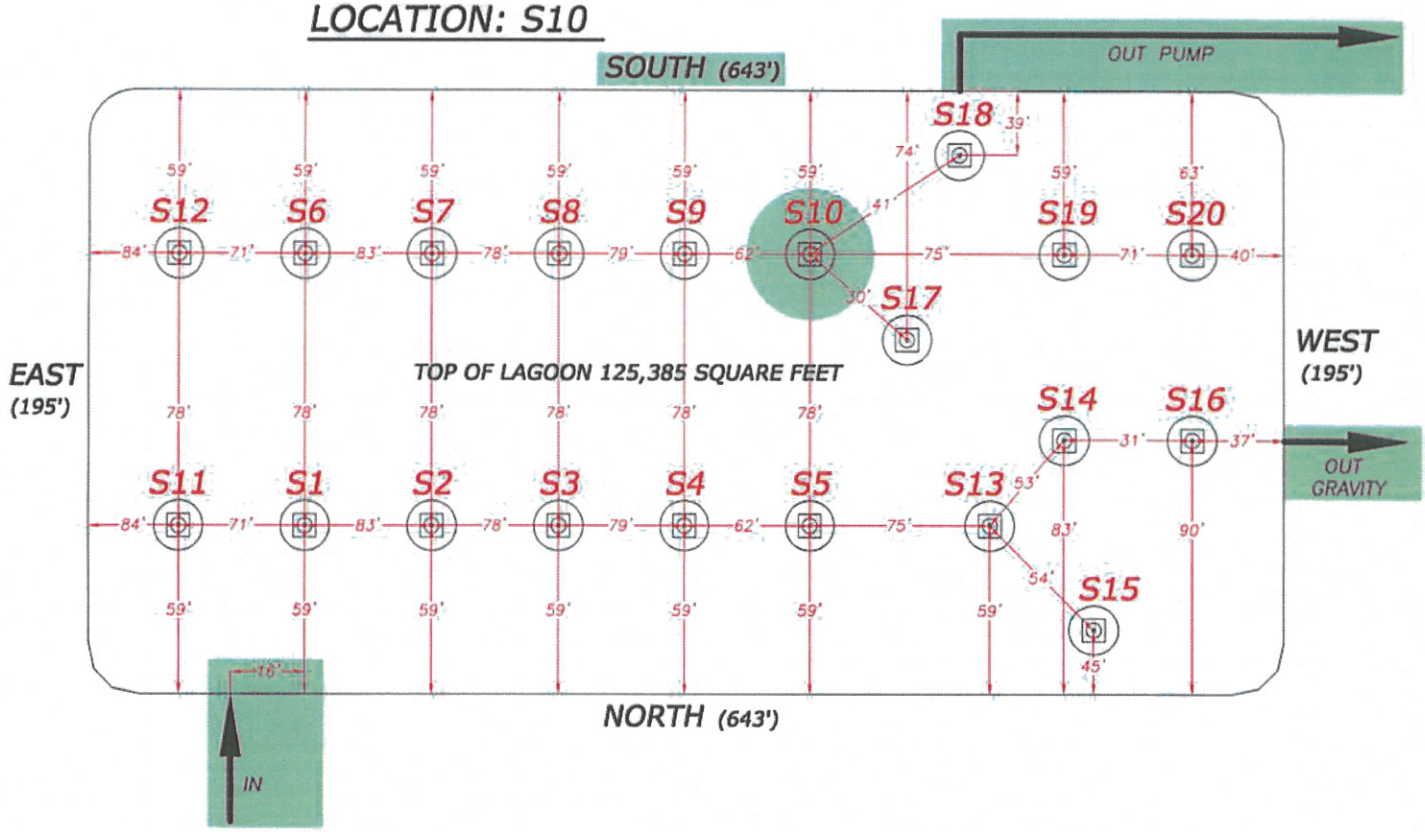
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	63.2	6.89
6 FT.	62.0	6.88
9 FT.	61.4	6.88
12 FT.	61.0	6.89
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

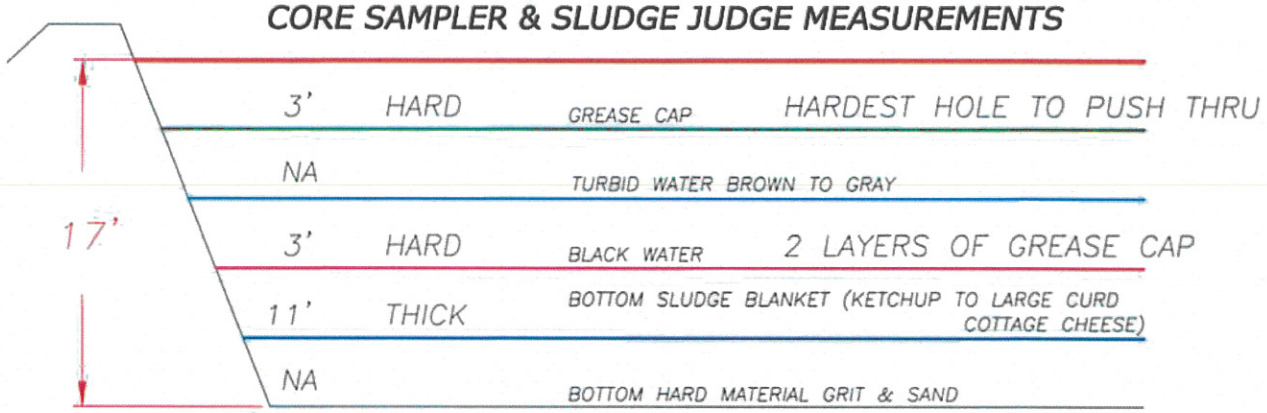
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

LOCATION: S10



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



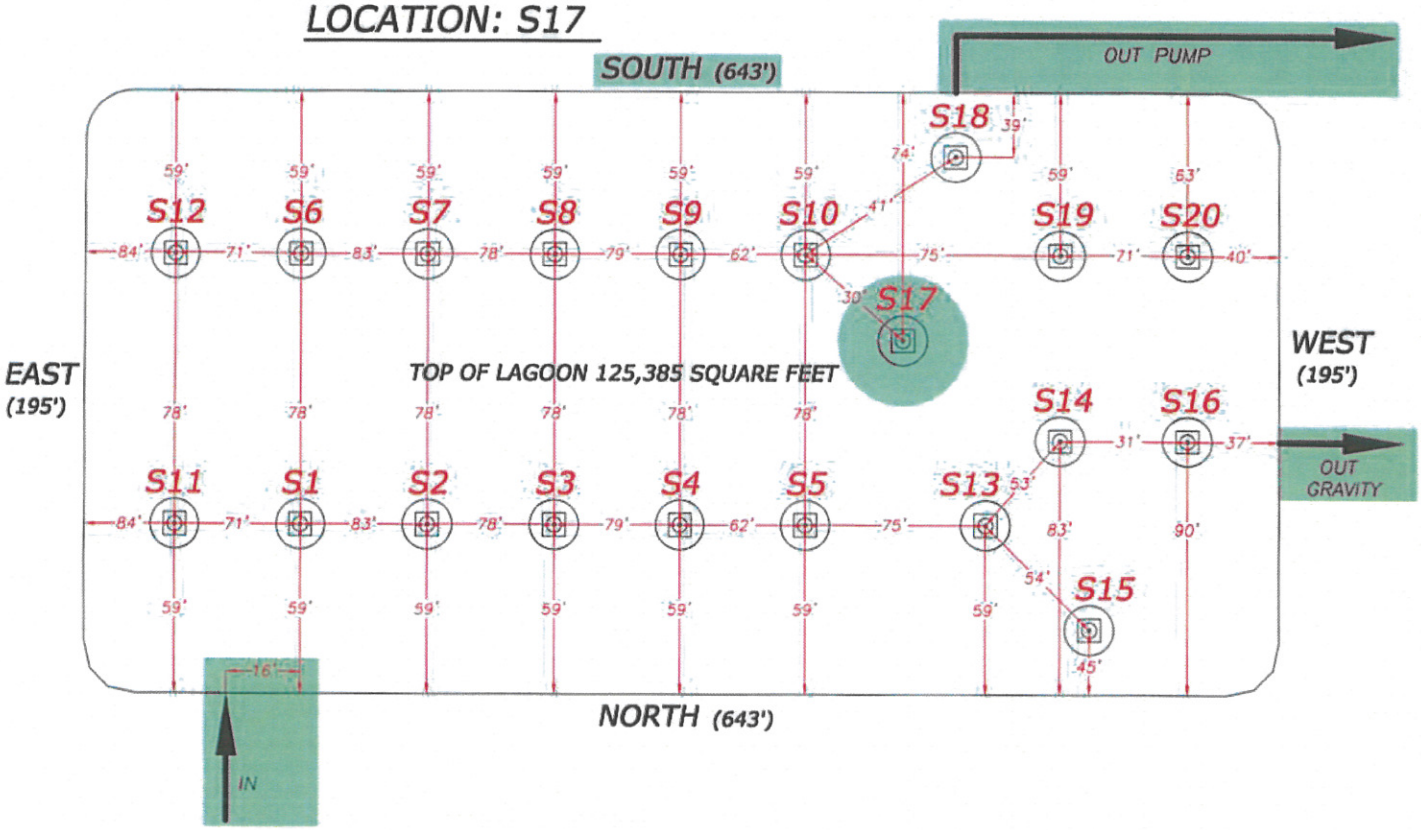
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	NA	NA
6 FT.	NA	NA
9 FT.	NA	NA
12 FT.	NA	NA
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

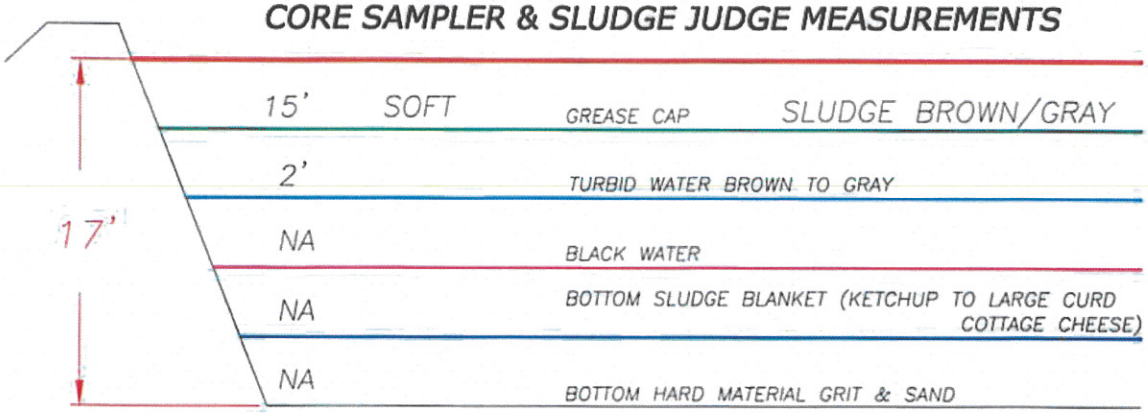
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

LOCATION: S17



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



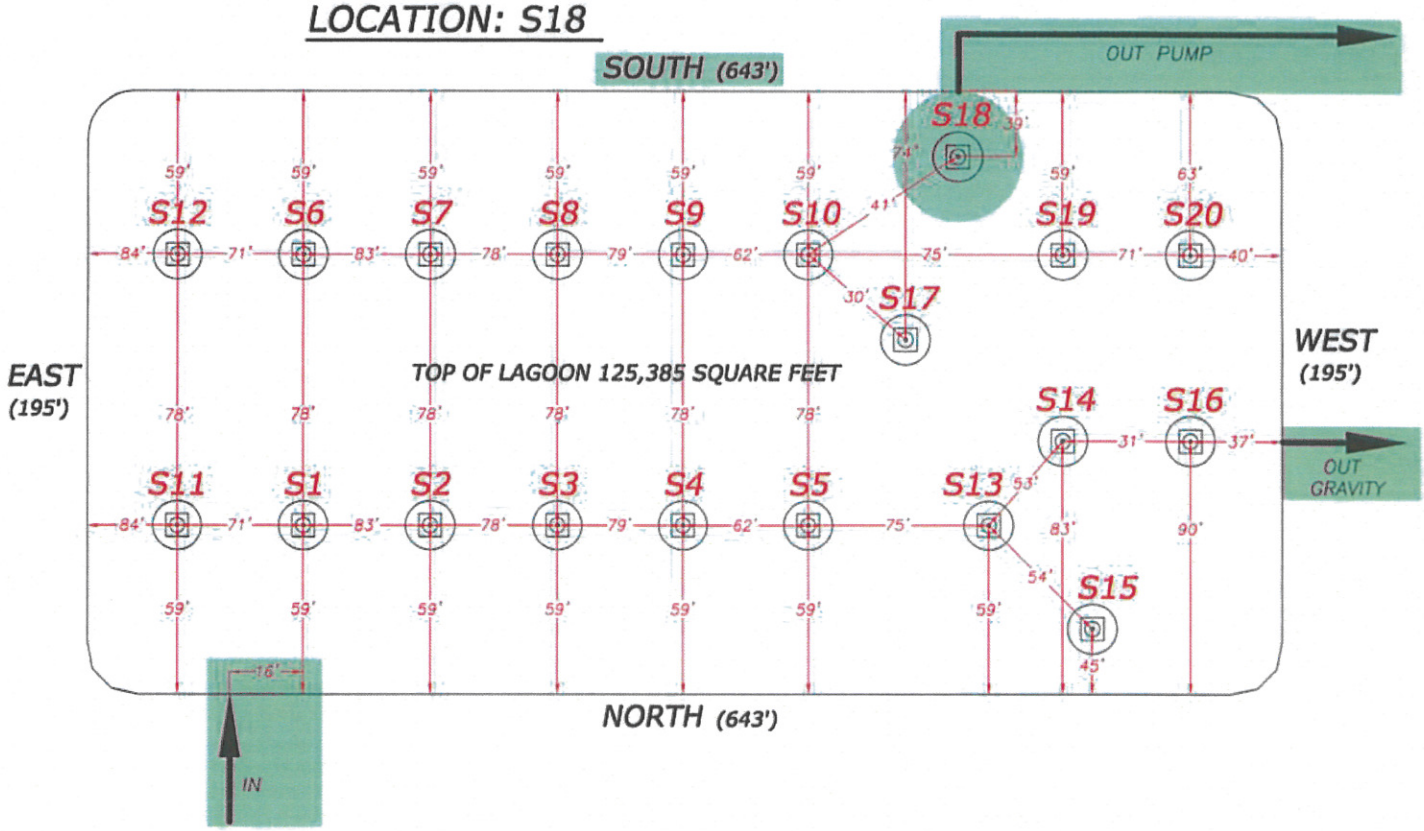
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	66.0	7.01
6 FT.	68.5	7.02
9 FT.	70.3	7.03
12 FT.	71.3	7.02
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

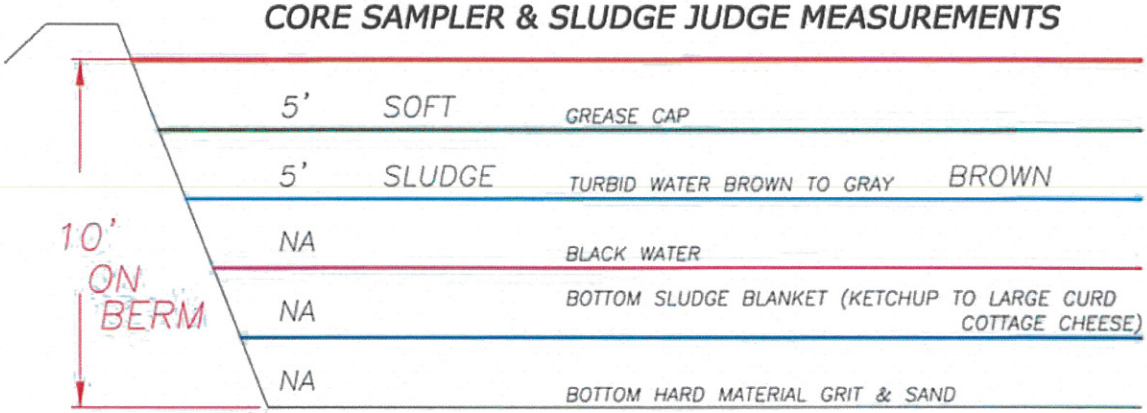
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

LOCATION: S18



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



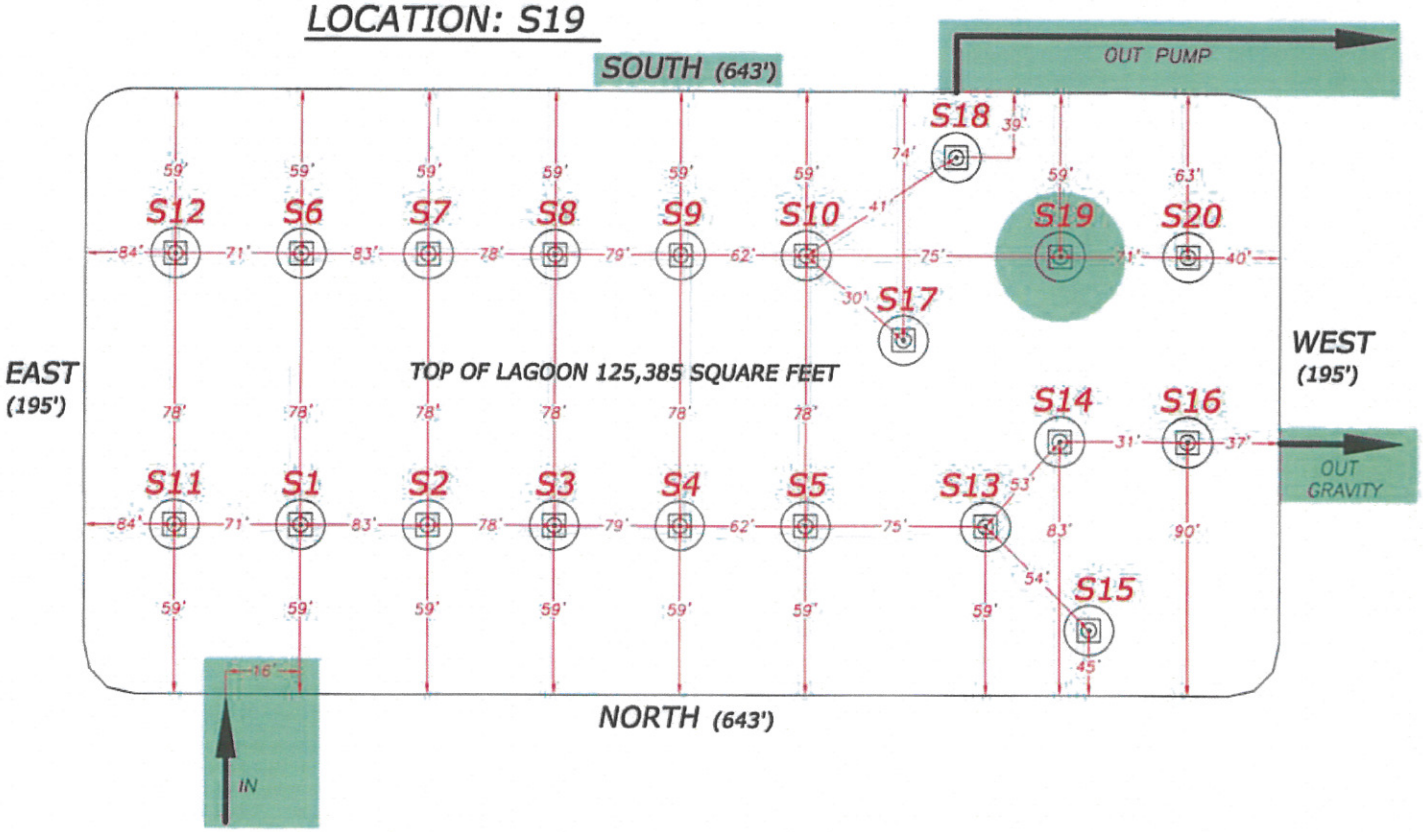
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	63.3	6.95
6 FT.	64.9	6.96
9 FT.	65.7	6.96
12 FT.	NA	NA
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

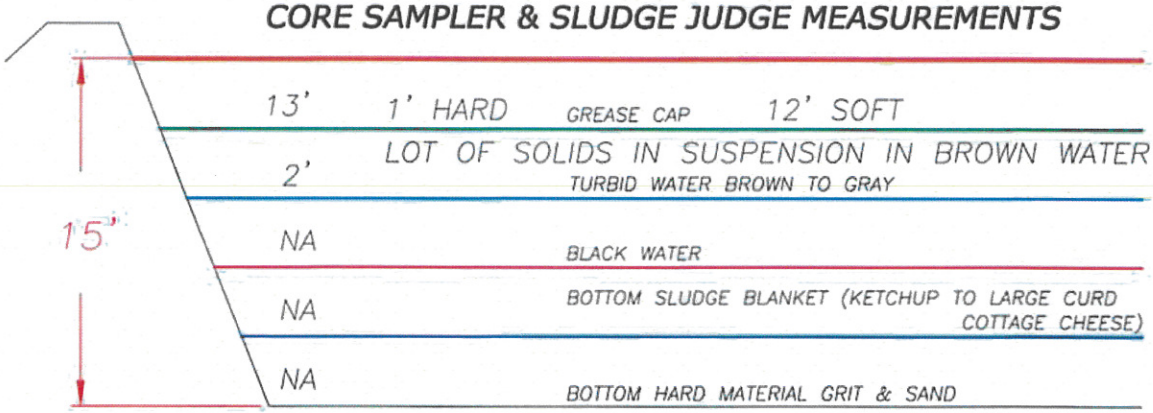
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

LOCATION: S19



CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



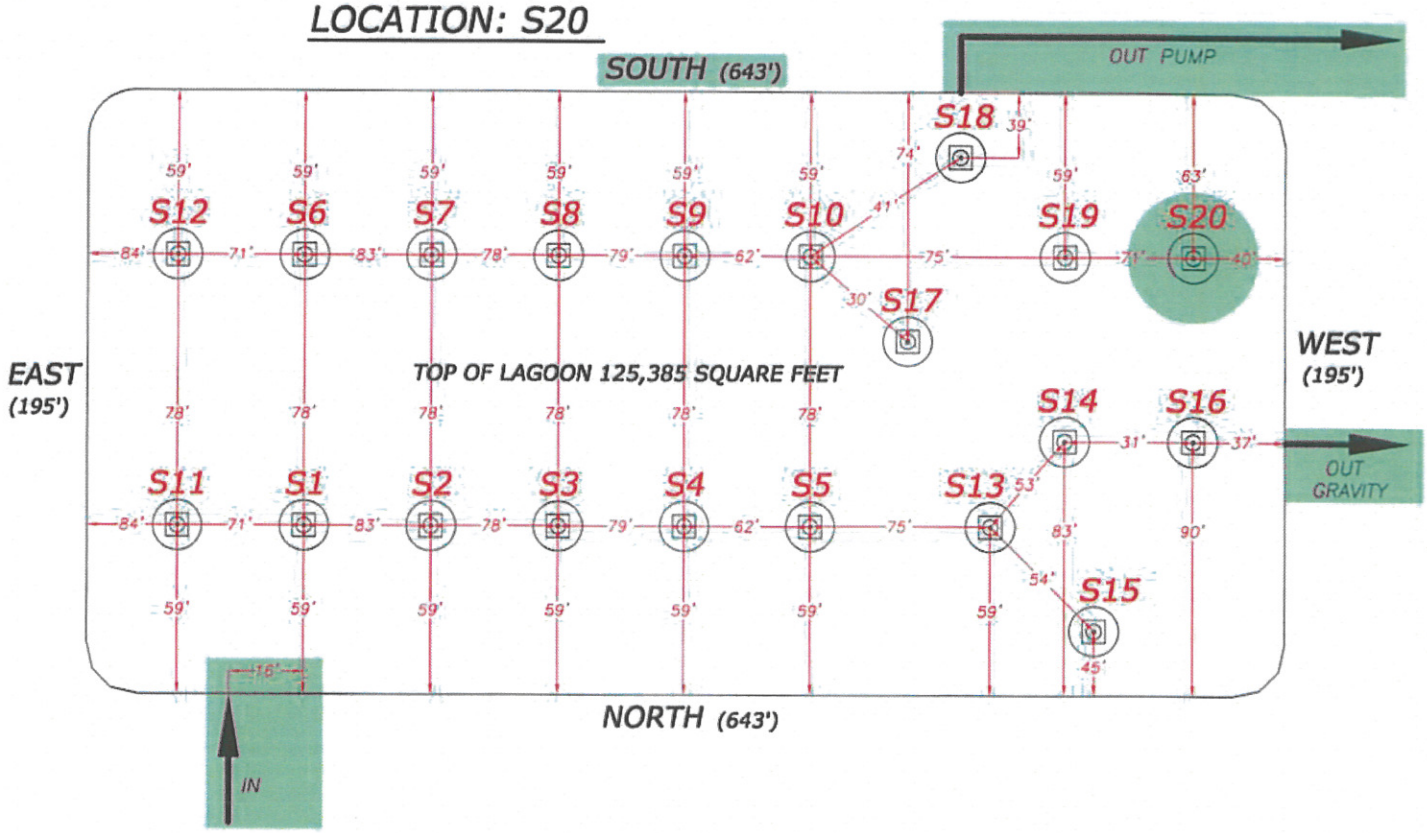
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	64.1	7.20
6 FT.	67.5	7.20
9 FT.	69.7	7.18
12 FT.	73.7	7.08
15 FT.	NA	NA

BRAWLEY ANAEROBIC LAGOON PROFILING 2/16-17/13

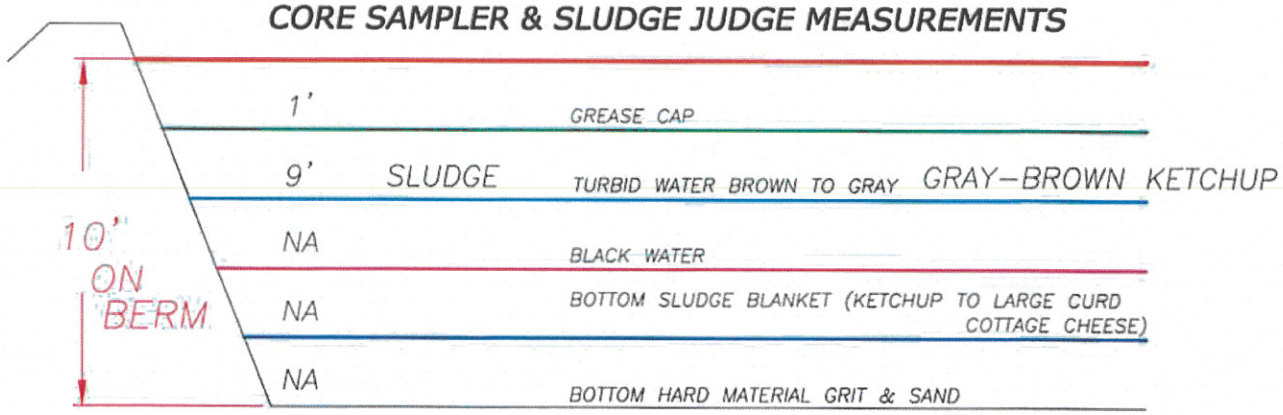
SAMPLE POINT LOCATION PROFILE

DATE:2-17-13

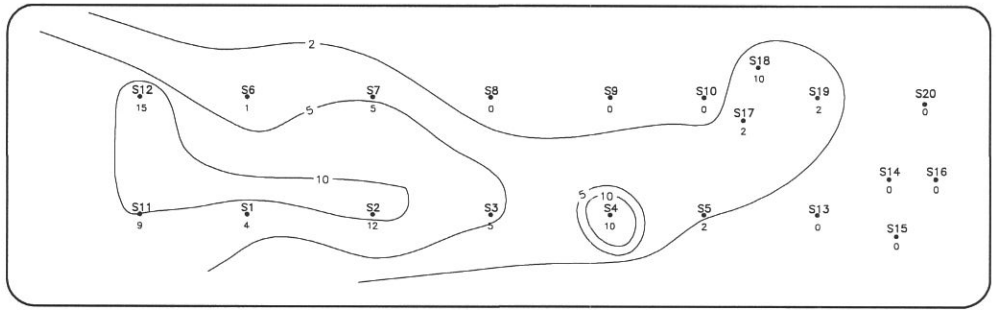
LOCATION: S20



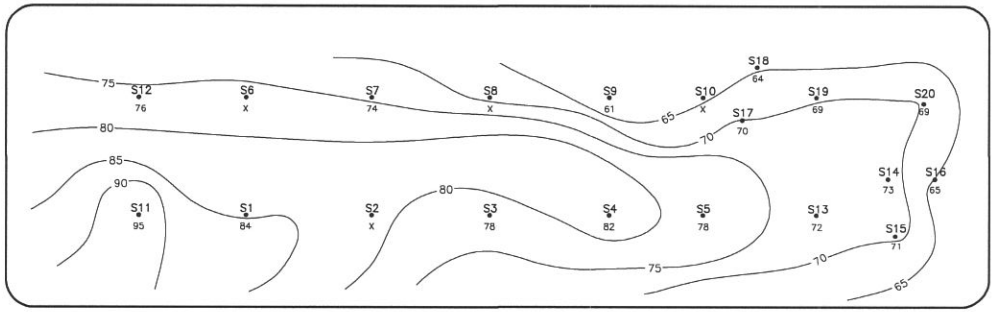
CORE SAMPLER & SLUDGE JUDGE MEASUREMENTS



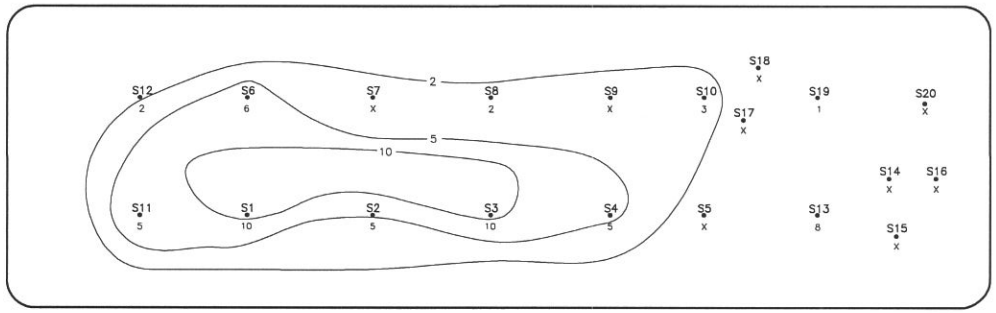
DEPTH FROM SURFACE	TEMPERATURE °F	pH
3 FT.	64.2	7.13
6 FT.	67.4	7.15
9 FT.	69.2	7.14
12 FT.	70.5	7.11
15 FT.	NA	NA



1 **WATER THICKNESS**
SCALE: 1"=40'



2 **TEMPERATURE**
SCALE: 1"=40'



3 **GREASE THICKNESS**
SCALE: 1"=40'

S14 SAMPLE POINT NUMBER

• SAMPLE POINT

10 MEASUREMENT AT THAT POINT

DRAWN BY: CRR	JOB DATE: 2013	BAR IS ONE INCH ON OFFICIAL DRAWINGS.	
APPROVED: JA	JOB NUMBER: 20120063	0 1"	
CAD DATE: 3/1/2013 5:37:47 PM		IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.	
CAD FILE: O:\20120063\CAD\Dwgs_Prelim\Figures\POND1.dwg			

NO.	DATE	BY	REVISION DESCRIPTION

HRGreen HRGreen.com

WASTEWATER TREATMENT PLANT
NATIONAL BEEF
BRAWLEY, CALIFORNIA

FIGURE 1
POND 1 ISOMETRIC

SHEET NO.
1

Xrefs: xg1-1-BG1; xg1-1-cert-dswol; scale; X-BR UTILITIES 000976-00 1 21 13

WASTEWATER PRE-TREATMENT FACILITY FINAL EFFLUENT WORKPLAN

WASTEWATER PRE-TREATMENT FACILITY
NATIONAL BEEF
BRAWLEY, CALIFORNIA
JUNE 4, 2014

Report Prepared By:
HR GREEN, INC.

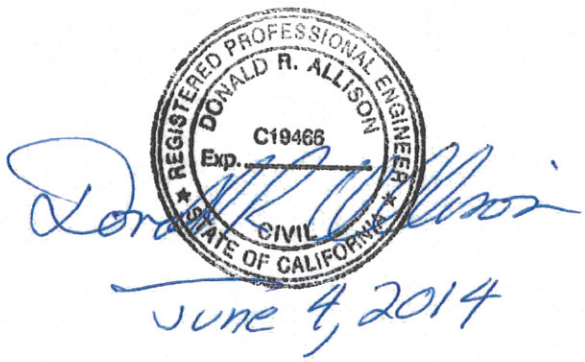
Certifications Page

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of California.

It is understood and agreed that the Consultant's Scope of Services under the current Agreement may not include subsequent field work, project observation or review of the Contractor's performance or any other construction phase services, and that such services will be provided for by the Client. The Client assumes all responsibility for interpretation of the Contract Documents and for construction observation and the Client waives any claims against the Consultant that may be in any way connected thereto.

In addition, the Client agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Consultant, its officers, directors, employees and subconsultants (collectively, Consultant) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising out of or in any way connected with the performance of such services by other persons or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to the Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct of the Consultant.

If the Client requests in writing that the Consultant provide any specific field or construction phase services, and if the Consultant agrees in writing to provide such services, then they shall be compensated for as negotiated.



June 4, 2014

WASTEWATER PRE-TREATMENT FACILITY FINAL EFFLUENT WORKPLAN

Wastewater Pre-Treatment Facility
National Beef California, LP
Brawley, California

Background:

National Beef California, LP (National Beef) operates a beef slaughter and rendering plant (Plant) at 57 East Shank Road in the City of Brawley (City), California. The Plant wastewater pre-treatment facility (WWPT), see Figure 1, discharges to the City of Brawley publicly owned treatment works (POTW). Under normal operation, flow through the WWPT progresses from beef processing through the following processes in sequential order:

- Screening;
- Two parallel dissolved air floatation units (DAF 1);
- An anaerobic lagoon (Pond 1);
- A single intermediate dissolved air floatation unit (DAF 2);
- An aerobic pond (Pond 2);
- Two clarifying ponds (Ponds 3A and 3B), and
- A suspended air floatation system (SAF).

A reserve pond used for slug load diversion (Pond 3C) is also part of the WWPT together with a belt filter press used to dewater sludge primarily from the SAF. National Beef has decided to close the Plant and the associated WWPT.

Purpose:

The purpose of this workplan is to define a preliminary schedule for the wastewater flows that will be discharged to the City of Brawley POTW during closure of the WWPT.

Final Effluent Flows:

The wastewater leaving the WWPT during closure will consist of:

- Beef processing,
- Sanitary,
- Equipment cleaning, and
- Final pond volume wastewaters.

The expected flow rates are presented in the attached schedule along with the sources of those flows. The beef processing wastewaters are the same as the wastewaters currently discharged, and the cleaning products used during closure will be the same cleaning

products which are currently used to clean down equipment. Final pond volumes will consist of the final settled wastewater from each of the respective ponds.

National Beef proposes to reinstate the sanitary discharge to the City gravity main without passing through the WWPT as indicated on the schedule. With the exception of the sanitary flows, National beef will treat the wastewater discharges leaving the Facility to the effluent concentration levels required by its existing wastewater permit with the City, and proposes to complete the closure process under the existing permit terms and conditions.

HRGreen	FACILITY SITE PLAN NATIONAL BEEF BRAWLEY, CALIFORNIA	Date: 05/20/2014 Project #: 20120063.21	N 0 200 Feet 1 in = 200 ft	FIGURE 1

File Name: \\hrgspnas\data\20120063.21\Design\GIS\ClosureMonitoringPlan-revised.mxd

National Beef Brawley WWPT Facility Final Effluent Schedule

Flow Rate	Wastewater Source	2014 (Week Beginning / Month)																		2015																2016														2017											
		3/17	3/24	3/31	4/7	4/14	4/21	4/28	5/5	5/12	5/19	5/26	6/2	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1.5 - 1.7 MGD	Beef Processing																																																					
	Equipment Cleaning																																																					
	Sanitary																																																					
	Pond 3C Final Volume																																																				
0.5-0.6 MGD	Equipment Cleaning																																																				
	Sanitary																																																				
< 0.5 MGD	Equipment Cleaning																																																				
	Ponds 3A/3B Final Volumes																																																				
	Pond 2 Final Volume																																																				
	Pond 1 Final Volume																																																				