

CHRISTI CRADDICK, CHAIRMAN  
RYAN SITTON, COMMISSIONER  
WAYNE CHRISTIAN, COMMISSIONER



LORI WROTENBERY  
DIRECTOR, OIL AND GAS DIVISION  
LESLIE SAVAGE, P.G.  
ASSISTANT DIRECTOR, TECHNICAL PERMITTING

# RAILROAD COMMISSION OF TEXAS

## OIL AND GAS DIVISION

PERMIT TO RECEIVE, STORE, TREAT AND DISPOSE OF CERTAIN  
NON-HAZARDOUS OIL AND GAS WASTES

### AMENDED

**Permit Nos. STF-059, R9 04-1301, P011946A,  
P011946B, P011946C, P011947A, P011947B,  
P011947C, P011948, P011949, P012620,  
and P012661**

Supersedes the Permit Issued on  
December 30, 2016

BLACKHORN ENVIRONMENTAL SVS LLC  
409 S CARANCAHUA ST  
CORPUS CHRISTI TX 78401

Based on information contained in the application, received on February 8, 2013, the transfer request from Blackhorn Environmental Svs, LLC, received on December 4, 2015, the amendment request by Blackhorn Environmental Svs, LLC, received on January 2, 2018, and subsequent information received to date, you are hereby authorized to receive, store, handle, treat, reclaim and dispose of certain nonhazardous oil and gas wastes as specified below at the following facility:

#### **Permit for Commercial Stationary Treatment Facility (STF)**

Blackhorn Waste Disposal Facility  
Michael Dugan A-135 and G.H. & H.R.R.CO. A-196 Surveys  
Latitude, Longitude: 27.935994°, -98.015240°  
Jim Wells County, Texas  
RRC District 04, Corpus Christi

#### NARRATIVE DESCRIPTION OF PROCESS:

The facility will be constructed in two separate phases that have different waste management units associated with each. During Construction Phase One, incoming dry oil and gas solid waste will be offloaded into the Collecting/Drying Pit (**P012620**) for stabilization prior to placement in the active Disposal Pit (**P011948 and P011949**); or may be directed to the active Disposal Pit if the waste passes a Paint Filter Test. All residual liquids will be containerized and disposed of in an authorized manner. Leachate from the Disposal Pit will be either containerized or pumped to a Collecting Pit (**P012661**) and will be disposed off-site at a permitted Class II injection well.

During Construction Phase Two, incoming oil and gas waste will be offloaded at the Material Processing Station, the Collecting/Drying Pit (**P012620**), the Collecting/Settling Pits (**P011946A, P011946B, P011946C, P011947A, P011947B and P011947C**), or at the active Disposal Pit (**P011948 and P011949**) depending on the liquid content and composition of the waste. The separated liquids will be pumped to the tank system in the Separation Area for further separation and hydrocarbon recovery.

Recovered oil will be salvaged or sold, and waste water will be disposed of in an authorized manner. Solids that accumulate in the Collecting/Settling Pits and the Material Processing Station will be conveyed to the Collecting/Drying Pit or to the centrifuges located in the Working Area for further dewatering and treatment. Dry waste received at the facility and from the centrifuges will be placed into the Collecting/Drying Pit or directly into the active Disposal Pit after passing a Paint Filter Test.

Authority is granted by the RRC to receive, store, handle, treat, reclaim and dispose of certain non-hazardous oil and gas wastes and reclaim oilfield hydrocarbons in accordance with 16 Texas Administrative Code (TAC) §3.8 (Statewide Rule 8) and §3.57 (Statewide Rule 57), and is subject to the following conditions:

#### I. GENERAL PERMIT CONDITIONS

- A. This permit is effective May 31, 2018 and expires November 13, 2019.
- B. The permittee may not receive, store, handle, treat, reclaim or dispose of oil and gas wastes at the facility until financial security in the amount of \$1,750,340.00 is provided for and approved by the Railroad Commission of Texas (RRC) for the referenced location. This amount provides financial security for the RRC permitted Waste Storage and Treatment Units (STF-059) as listed below.
- C. In accordance with 16 TAC § 3.78 the permittee shall maintain financial security in the amount of \$1,750,340.00 until this facility and all of the referenced Permit Nos.: **STF-059, R9 04-1301, Collecting Pits (P011946A, P011946B, P011946C, P011947A, P011947B, P011947C and P012661), Collecting/Drying Pit (P012620) and Disposal Pits (P011948 and P011949)**, have been closed in accordance with this permit. Technical Permitting reserves the right to revise this amount, as necessary. Prior to any modification or expansion of this facility that would require increased financial security, an updated Closure Cost Estimate must be submitted to Technical Permitting in Austin, and any additional financial security must be filed with and approved by the RRC prior to making that modification.
- D. No waste may be received at the referenced facility until a Restrictive Covenant is signed by a representative of the permittee, the landowner, and a representative of the RRC; and the signed document is filed in the Real Property Records of Jim Wells County, Texas; and proof of filing with Jim Wells County is submitted to and approved by the RRC.
- E. No waste may be received at the referenced facility until the groundwater monitoring wells required by Permit Condition XIV. of this permit have been completed, developed and sampled. The documentation required by Permit Conditions XIV.A. and XIV.C. must be provided to and approved by Technical Permitting within 30 days after installation of groundwater monitoring wells.
- F. A copy of the site-specific Spill Control Plan that details means and methods of waste management and containment in the event of a release or discharge must be maintained on-site and made available to RRC staff for review and inspection upon request.
- G. The facility's Stormwater Management Plan shall be maintained on-site and made available upon request of the RRC.
- H. A discharge permit from the Environmental Protection Agency (EPA) may be required for non-contact stormwater discharges. If required, the permit form the EPA must be in place prior to commencement of discharge operations.
- I. This permit does not authorize the discharge from the facility of any oil and gas waste, including contaminated or contact stormwater.

- J. The permittee may not receive, store, handle, treat, reclaim or dispose of oil and gas waste at the facility until all necessary air permits (if any) are obtained from the Texas Commission on Environmental Quality (TCEQ).
- K. Technical Permitting in Austin and the Corpus Christi District Office must be notified in writing when the construction of each phase of the facility is initiated and with the completion of the disposal pit and/or each waste management unit.
- L. Technical Permitting in Austin and the Corpus Christi District Office must be notified in writing upon final completion of each phase of construction of the facility. The permittee may not begin receiving, storing, handling, treating, reclaiming or disposing of oil and gas waste until the Corpus Christi District Office has performed an inspection of the completed facility and has verified that the facility is constructed in accordance with the application and this permit.
- M. Unless otherwise required by conditions of this permit, construction, use and maintenance of the facility must be in accordance with the information represented in the permit application and attachments thereto. When construction of the facility is completed, submit the “*as-built*” plans to be incorporated as part of the permit application.
- N. The “*Application for Permit to Operate a Reclamation Plant*” (Form R-9), which is attached and incorporated into this permit as **Permit Appendix A**, grants authority for the reclamation of oil field related hydrocarbons and does not cover reclamation of any refined products. Commingling or blending of refined products with crude is not permitted unless written authority is granted by the RRC’s Director of Field Operations following a formal written request for such blending by the Reclamation Plant operator. Any deliveries made containing products or crude blended with products must be clearly identified on the RRC Form R-2 as “*Products*” or “*Crude Blended with Products*”.
- O. The removal of tank bottoms or other hydrocarbon wastes from the facility for which a monthly report (Form R-2) is not filed with the RRC must be authorized in writing by the RRC prior to such removal. A written request for such authorization must be sent to Technical Permitting in Austin and must detail the location, description, estimated volume and specific origin of the material removed, as well as the name of the reclaimer and intended destination of the material.
- P. The receipt of any tank bottoms or other hydrocarbon wastes from outside the State of Texas must be authorized in writing by the RRC prior to such receipt. Written approval from the RRC is not required if another regulatory agency indicated, in the appropriate monthly report, a corresponding delivery of the same material.
- Q. An On-Site Sewage Facility (OSSF) may be constructed, operated and maintained within the boundaries of the subject facility without an additional permit from the Commission if: (1) the OSSF waste is not commingled with any other oil and gas waste; (2) the system is designed by a Professional Engineer registered in the state of Texas or a sewage system installer licensed in the state of Texas; and (3) the construction, operation and maintenance of the OSSF complies with all applicable local, county and state requirements.
- R. Any deviation from this permit must be approved by amendment from Technical Permitting in Austin before implementation.
- S. Any soil additives, bioaccelerators or treatment chemicals must be approved by Technical Permitting prior to use at the facility.
- T. Safety Data Sheets (SDS) must be submitted to Technical Permitting in Austin for any chemical or compound proposed to be used in the treatment of waste at the facility. Use of

the compound is contingent upon RRC approval. All chemicals must be stored according to the manufacturer's specifications.

- U. All chemical laboratory analyses required to be performed in accordance with this permit must be performed using appropriate Environmental Protection Agency (EPA) methods or Standard Methods by an independent National Environmental Laboratory Accreditation Program (NELAP) certified laboratory neither owned nor operated by the permittee. Any sample collected for chemical laboratory analysis must be collected and preserved in a manner appropriate for that analytical method as specified in 40 CFR Part 136. All geotechnical testing must be performed by a laboratory certified to conduct geotechnical testing according to the standards specified by ASTM International (ASTM) and approved by a Professional Engineer licensed in the state of Texas.
- V. The permittee must make all records required by this permit available for review and/or copying during normal business hours upon request of RRC personnel.
- W. This permit may be considered for administrative renewal upon review by the RRC. Any request for renewal should be received at least 60 days prior to the permit expiration date.
- X. This permit is nontransferable without consent of the RRC. Any request for permit transfer must be filed with Technical Permitting in Austin at least 60 days before the permittee wishes the transfer to take place.
- Y. The permittee shall submit a Quarterly Report according to the following:
  - 1. The report shall contain applicable information as required in Permit Conditions III.D., III.J., IV.M., V.L., VII.C., VII.F., VII.M., IX.J., X.M., XI.F., XIII.C. and XV.H. of this permit.
  - 2. The quarterly reporting periods shall be January 1 through March 31, April 1 through June 30, July 1 through September 30, and October 1 through December 31 of each year.
  - 3. The reports shall be submitted to Technical Permitting in Austin and the appropriate District Office no later than the 30th day of the month following each reporting period, or each April 30th, July 30th, October 30th, and January 30th, respectively.
  - 4. An Executive Summary shall be included that describes facility operations and relevant activities that occurred during the specific quarter.
  - 5. Data tables presenting volumes or amounts of treated waste shall be included.
  - 6. The laboratory analytical reports and the corresponding chain of custody shall be provided for all chemical analyses performed.
- Z. Failure to comply with any provision of this permit shall be cause for modification, suspension, termination or cancellation of this permit if Technical Permitting determines that the permittee is in violation of Statewide Rule 8 (d)(6)(E).

## II. AUTHORIZED WASTES

- A. Only oil and gas wastes subject to the jurisdiction of the RRC that are non-hazardous according to Subtitle C (Resource Conservation and Recovery Act (RCRA)), may be received. You may receive, store, handle, treat, process, and dispose of **only** the following oil and gas wastes:
  - 1. Contaminated soils from crude oil or condensate spills, pipeline and saltwater spills or from production operations;
  - 2. Iron Sulfide, which has been fully oxidized;

3. Spent activated carbon and other oil and gas waste filtering and separation media;
  4. Absorbent pads from crude oil spills;
  5. Liners from reserve pits; and
  6. Solid waste from gas dehydration and sweetening activities (spent filters and filter media, molecular sieves, precipitated anime sludge, iron sponge and hydrogen sulfide scrubber sludge).
  7. All oil and gas wastes outlined in Permit Condition II.A.1.;
  8. Water-based drilling fluids and associated cuttings;
  9. Oil-based drilling fluids and associated cuttings;
  10. Non-injectable waste waters (too many solids to directly inject into an injection well without pretreatment for solids removal);
  11. Production tank bottoms that are subsequently chemically and/or heat treated; and
  12. Formation sands and other solids from saltwater storage tanks or vessels and saltwater pits.
- B. No other waste may be accepted at this facility.
- C. RCRA non-exempt wastes under the jurisdiction of the RRC may be accepted and processed at the facility if analytical results demonstrate that the waste is characteristically non-hazardous. See Permit Condition III.F.
- D. No oil and gas Naturally Occurring Radioactive Material (NORM) waste as defined in 16 TAC §4.603 (Oil and Gas NORM) or waste from a facility that is licensed by the Texas Department of State Health Services (DSHS) to process or treat oil and gas NORM waste may be received at the facility.
- E. No asbestos-containing material regulated under the Clean Air Act or polychlorinated biphenyls (PCB) material regulated under the Toxic Substances Control Act may be accepted for processing at this facility.
- F. All waste haulers received at the facility must be currently permitted Oil and Gas Waste Haulers and must have the subject facility listed as an approved disposal facility on their "*Oil and Gas Waste Hauler's Authority to use Approved Disposal/Injection System*", (Form WH-3).

### III. WASTE TESTING AND RECORD KEEPING REQUIREMENTS

- A. For the purposes of this permit a representative sample of incoming waste is defined as a composite sample composed of four grab samples mixed to form one composite from each 50 cubic yards of waste material from each job (e.g., from each well, pit, spill location).
- B. Each load of incoming waste, other than water-based drilling fluids and associated cuttings or oil-based drilling fluid and associated cuttings, must be scanned for the presence of NORM using a scintillation meter with a sodium iodide detector or other equivalent devices that comply with 25 TAC 289.259, Texas Regulations for Control of Radiation (TRCR Part 46). Manufacturer's specifications must be submitted to Technical Permitting for equivalent devices used for NORM detection. Any load with a reading of 50 microrentgens per hour or greater may not be unloaded or processed at the facility unless further analysis of the waste demonstrates that the waste does not exceed 30 picocuries per gram of Radium-226 combined with Radium-228, or 150 picocuries per gram of any other radionuclide.

- C. The operator of the Reclamation Plant (**R9 04-1301**) must conduct a shakeout test on all tank bottoms or other hydrocarbon wastes upon removal from any producing lease tank, pipeline storage tank, or other storage vessel from a production facility to determine crude oil content and lease condensate thereof.
- D. All waste shall pass a Paint Filter Test (EPA Method 9095) prior to interment into a disposal pit. The results from each Paint Filter Test must be submitted to Technical Permitting in Austin as part of the Quarterly Report required in Permit Condition I.Y.
- E. **Prior** to receipt at the site, representative samples of waste from commercial oil and gas facilities and Reclamation Plants must be analyzed for either of the Parameters listed below and may not exceed the Limitation for the respective Parameter:

<u>PARAMETER</u>	<u>LIMITATION</u>
Total Organic Halides (TOX) <i>(EPA Method 9020B)</i>	100 mg/L
<b>OR</b>	
Extractable Organic Halides (EOX) <i>(EPA Method 9023)</i>	100 mg/kg

Special authorization for disposal of waste with a TOX/EOX greater than 100 mg/L may be considered. Authority must be obtained from Technical Permitting in Austin prior to receipt of waste.

- F. **Prior** to acceptance at the site, representative samples of incoming RCRA non-exempt waste or any international waste must be analyzed for the following Parameters and may not exceed the specified Limitations:

<u>PARAMETER</u>	<u>LIMITATION</u>
Corrosivity	pH 2.0 -12.5 standard units (s.u.) <i>(EPA Method 1110A, 9040C or equivalent)</i>
Ignitability	Flash Point < 60° C <i>(EPA Method 1010A, 1020B, or 1030A)</i>
Reactivity	No materials exhibiting the characteristic of reactivity as defined by RCRA
Toxicity	No materials exhibiting the characteristic of toxicity as defined by RCRA <i>(EPA Method 1311)</i>

Metals: Toxic Characteristic Leaching Procedure (TCLP)  
*(EPA Method 1311/6010/6020/7147A)*

Arsenic (As)	< 5.0 mg/L
Barium (Ba)	< 100.0 mg/L
Cadmium (Cd)	< 1.0 mg/L
Chromium (Cr)	< 5.0 mg/L
Lead (Pb)	< 5.0 mg/L

<u>PARAMETER</u>	<u>LIMITATION</u>
Mercury (Hg)	< 0.2 mg/L
Selenium (Se)	< 1.0 mg/L
Silver (Ag)	< 5.0 mg/L
Benzene (EPA Method 1311/8260/8021B)	< 0.5 mg/L

- G. Details of receipts, deliveries for incoming waste to be processed at the Reclamation Plant (**R9 04-1301**) and the stock on hand (available for re-sale) must be reported monthly on the Form R-2, "*Monthly Report for Reclaiming and Treating Plants*". Submit the original of the Form R-2 report directly to Technical Permitting in Austin and a copy of the report to the appropriate District Office by the 15th day of the calendar month following the month by the report. Form R-2 shall be completed in accordance with Statewide Rule 57.
- H. The permittee must maintain the following records on each load of waste received at the facility for a period of three (3) years from the date of receipt:
1. Description of the site where the waste was generated, including:
    - a. Generator name;
    - b. Lease name and number and well number(s), or gas ID number(s), or American Petroleum Institute (API) well number(s); or latitude and longitude coordinates in decimal degrees if waste was not generated on a lease; and
    - c. County.
  2. Name and RRC permit number of the transporter;
  3. Volume of waste material (specify units); and
  4. Detailed description of the type of waste, including any analysis required by Permit Conditions III.B., III.C., III.D., III.E. and III.F. above.
- I. The permittee shall maintain the following records on each load of waste removed from the facility for a period of three (3) years from the date of receipt:
1. Date waste is removed and hauled to a disposal facility;
  2. Name and RRC permit number of the transporter;
  3. Volume (specify units) of each shipment of waste hauled to a disposal facility;
  4. Type of waste (basic sediment, water, water-based mud, etc.); and
  5. Name and permit number of the facility to which the waste was hauled to for disposal.
- J. A report must be submitted to Technical Permitting in Austin and the appropriate District Office as part of the Quarterly Report required in Permit Condition I.Y. and shall include the following information:
1. All records required by Permit Conditions III.H., and III.I. above, as well as a table summary of waste receipts;
  2. The total volume of each type of waste material received during the specific quarter; and
  3. Total volume of each type of waste that leaves the facility for disposal or final disposition during the quarter.

#### IV. GENERAL FACILITY DESIGN AND MAINTENANCE REQUIREMENTS

- A. The general layout and arrangement of the facility must be consistent with the “*SITE PLAN*” (SHEET P-1) and the “*BLACKHORN MATERIAL PROCESSING AREA PLAN*” (SHEET P-2) diagrams, received on April 2, 2018, which are attached to and incorporated as part of this permit as **Permit Appendix B**.
- B. A sign must be posted at each entrance to the facility. The sign must be readily visible and show the operator name, facility name, and permit number in letters and numerals at least three inches in height.
- C. The facility will be constructed in two phases: **Construction Phase One** with the facilities outlined in Permit Condition IV.C.1., and **Construction Phase Two** with the facilities outlined in Permit Condition IV.C.2. The entire facility shall consist of and is defined by the following waste management unit designations:
  1. **Construction Phase One:**
    - a. Drying Area:
      - (1) Two Truck Wash Bays;
      - (2) Tank Pad;
      - (3) One 750 bbl Settling Tank;
      - (4) Three 500 bbl Settling Tanks;
      - (5) Two 400 bbl Setting Tanks; and
      - (6) One Collecting/Drying Pit (**P012620**).
    - b. Two Disposal Pits (**P011948** and **P011949**); and
    - c. One Collecting Pit (**P012661**).
  2. **Construction Phase Two:**
    - a. Separation Area:
      - (1) Tank Pad;
      - (2) One 71 bbl Fresh Water Tank;
      - (3) Six 750 bbl Settling Tanks;
      - (4) Two 750 bbl Cascade Tanks;
      - (5) Two 750 bbl Gunbarrel Tanks;
      - (6) Two 400 bbl Slop Oil Tanks; and
      - (7) One 400 bbl Oil Tank.
    - b. Settling Basin
      - (1) Two Liquified Waste Transfer Ramps; and
      - (2) Six Collecting/Settling Pits (**P011946A**, **P011946B**, **P011946C**, **P011947A**, **P011947B** and **P011947C**).
    - c. Working Area:
      - (1) Two Solid Waste Transfer Ramps;
      - (2) Centrifugal Dryer; and

(3) Centrifuge.

- D. No waste, treated or untreated, may be placed directly on the ground.
- E. All storage tanks, equipment and roll-off boxes must be maintained in a leak-free condition. If inspection of a tank, roll-off box or storage vessel reveals deterioration or leaks, it must be repaired or replaced before resuming use of the tank.
- F. All storage tanks containing fluid waste or fuel shall be contained within dikes or berms. Secondary containment of 120% total storage capacity is recommended; however, a firewall capacity that will capture 100% of the volume of the largest tank plus the volume of a 25-year/24-hour rainfall event for Jim Wells County is acceptable.
- G. Any spill of waste, chemicals, or any other material must be collected and containerized within 24 hours and conveyed through the treatment process or disposed of in an authorized manner.
- H. Any chemical used in the treatment process shall be stored in vessels designed for the safe storage of that particular compound and these vessels shall be maintained in a leak free condition.
- I. Berms or containment structures must be constructed around all waste management units and must be compacted or constructed of material that meets 95% Standard Proctor (ASTM D698) or 90-92% Modified Proctor (ASTM D1557) density. Each berm shall maintain a slope no steeper than a one to three (vertical to horizontal) ratio, unless constructed of concrete or equivalent material (firewalls). These structures must be used to divert non-contact storm water around the waste management areas and contain and isolate contact storm water within the waste management units. Refer to the stormwater management requirements specified in Permit Condition XII.
- J. The facility shall maintain security to prevent unauthorized access. Access shall be secured by a 24-hour attendant or a six-foot-high security fence and locked gate when unattended to prevent vehicle or livestock access. Fencing shall be required unless terrain or vegetation prevents truck or livestock access except through entrances with lockable gates.
- K. The entrance/exit to the facility must have a concrete/asphalt berm that is at least one-foot in height and eight-feet wide with a grated trench on the interior side to capture surface flow from the site.
- L. No oil may be allowed to accumulate on top of the water or wastes stored in the pits. Any oil on top of the liquids must be collected and handled in accordance with RRC rules. Any recovered oil must be recorded and filed with the RRC on either a Skim Oil/Condensate Report (Form P-18) or a "*Letter of Authority Request for Oil Movement*" (Form T-1) Letter:
  - 1. A Skim Oil/Condensate Report (Form P-18) must be filed with the RRC every month to record skim oil volumes recovered and sold during the operation of this facility. If no skim oil is recovered for a given month, a (Form P-18) should still be filed with the RRC.

**OR**

- 2. An original signed "*Letter of Authority Request for Oil Movement*" (Form T-1) must initially be submitted on letterhead to Field Operations, Austin, TX, Oil and Gas Division, for every event in which sellable skim oil is recovered and intended to be sold during the operation of this facility. Filing frequency requirements may be redefined after the initial oil movement request has been processed. The request must include:
  - a. The time period for which oil movement authority is requested;

- b. The name of the applicant requesting to move the oil;
  - c. Volume (barrels) of oil to be moved;
  - d. Name and location of the facility which the oil will be moved to;
  - e. Name, address, telephone, and fax number of facility buying the oil to be moved;
  - f. Contact person, T-1 permit number, and P-5 Operator Number of the oil buyer; and
  - g. A description of the source(s) of the oil at the facility.
- M. Each month an inspection of the entire facility must be performed on all concrete slabs, processing equipment, containment berms, and aboveground storage tanks or vessels for deterioration, leaks and spills. The records of each inspection must be kept on-site and maintained for a period of three (3) years from the date of the inspection. The following must be included in the inspection report and submitted as part of the Quarterly Report required by Permit Condition I.Y.:
1. The results of the monthly inspection of concrete slabs and the sacrificial soil layer for Collecting/Drying Pit (**P012620**) within the facility for evidence of deterioration, leakage, or storm water run-on, and a description of corrective action taken, if any.
  2. The results of the monthly inspection of process equipment, tanks, and roll-off boxes for evidence of deterioration or leakage, and a description of corrective action taken, if any.
  3. The results of the monthly inspection of waste levels within the storage areas, tanks, and roll-off boxes, and a description of corrective action taken, if any.
  4. The results of the monthly inspections of the erosion structures to control and modulate run-off to surface waters and indicate whether debris has been removed.

#### V. CONSTRUCTION AND OPERATION OF THE DRYING AREA (**P012620**)

- A. The general layout and arrangement of the Collecting/Drying Pit (**P012620**) must be consistent with the “*DRYING PAD CROSS SECTIONS*” (SHEET P-3) diagram, received on April 2, 2018, which is attached and incorporated as part of this permit as **Permit Appendix C**.
- B. Use of the pit is limited to the collection of non-hazardous oil and gas wastes as specified in Permit Condition II.A. for processing, stabilization and staging of solids prior to placement in the active on-site Disposal Pit (**P011948** and **P011949**). No other oil field fluids or oil and gas wastes may be stored or staged in the pit.
- C. A sign shall be posted identifying the Collecting/Drying Pit (**P012620**) by name and permit number in letters and numerals at least three inches in height.
- D. The Truck Washout Area shall be an above grade structure that is approximately 32 feet wide by 62 feet long and subdivided into two separate bays. The slab shall be constructed of steel reinforced concrete with a minimum thickness of 12 inches. The Truck Washout Bays must slope towards the concrete, grated culvert used to transfer liquids to the concrete collection basin that is part of the Collecting/Drying Pit (**P012620**).
- E. The Collecting/Drying Pit (**P012620**) must be approximately 322 feet long by 222 feet wide by 11 feet deep at its deepest point. The maximum useable capacity is 12,732 barrels or 2,648 cubic yards.

- F. Berms must be constructed and maintained on all sides of the pit with a slope no steeper than a one to three (vertical to horizontal) ratio and meet compaction criteria specified in Permit Condition IV.H.
- G. At least a **two-foot buffer** must be maintained between the toe of the staged waste and the containment berms. The waste staged in the pit shall not exceed **one (1) foot** in height at any time.
- H. The pit shall be constructed and used to gravity drain, air dry, evaporate or solidify semi-solid waste that does not pass the Paint Filter Test. The dried solid wastes that pass a Paint Filter Test maybe disposed of in an active Disposal Pit.
- I. Accumulated liquid waste within the Collecting/Drying Pit (**P012620**) shall be removed, as needed, to maintain freeboard. Liquid waste shall be transferred to the settling tanks for further processing. After the completion of Construction Phase Two the liquids may be transferred to the Collecting/Settling Pits (**P011946A, P011946B, P011946C, P011947A, P011947B, P011947C, P012661**) for evaporation or disposed of in an authorized Class II injection well.
- J. The Collecting/Drying Pit (**P012620**) must be constructed in accordance with the liner system installation methods included in the application and consist of at least 24 inches of compacted clay with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/s that is overlain with at least three feet of a protective soil layer. The collection basin must be constructed of at least 24 inches of compacted clay with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/s that is overlain with at least 6 inches of steel reinforced concrete. The floor of the Collecting/Drying Pit must have at least a 1% slope to allow fluids to drain to the collection basin.
- K. The liners must be installed and maintained in accordance with the application, best management and sound engineering practices.
- L. In addition to the monthly sacrificial soil layer inspections required by Permit Condition IV.M., the Collecting/Drying Pit (**P012620**) must be visually inspected annually for deterioration and leaks. Waste may be staged away from the inspected areas and moved to accommodate the inspection. A record of each inspection and photographs of the interior of Collecting/Drying Pit (**P012620**) must be maintained by the permittee and shall be submitted to Technical Permitting in Austin as part of the Quarterly Report required in Permit Condition I.Y. The appropriate District Office must be notified by phone or email at least 48 hours before emptying the pits for inspection.
- M. The liner must be inspected whenever evidence of liner leakage arises. If inspection of the liner reveals a leak or other loss of integrity, no waste shall be added to Collecting/Drying Pit (**P012620**), and the liner must be replaced or repaired and re-inspected by RRC personnel before resuming use of the pit.
- N. The area surrounding the pit must be graded such that all surfaces slope away from the pit to prevent surface flow stormwater from entering the pit.
- O. This permit does not authorize the discharge of waste from the pits to the ground surface or to surface water.
- P. Unless otherwise required by conditions of this permit, construction, use and maintenance of the pit must be in accordance with the information represented on the application (Form H-11) and attachments thereto.

## VI. CONSTRUCTION OF DISPOSAL PITS (P011948 and P011949)

- A. The general layout and arrangement of the Disposal Pits (**P011948** and **P011949**) must be consistent with the application and the “*CELL DESIGN*” (SHEET 2-4) and “*CELL 1 AND 2 CROSS SECTIONS*” (SHEET 2-5) diagrams, dated January 25, 2013, and the “*LINER DETAILS*” (SHEET P-4) diagram, received February 8, 2018, which are attached to and incorporated as part of this permit as **Permit Appendix D**.
- B. Technical Permitting in Austin and the Corpus Christi District Office must be notified in accordance with Permit Condition I.K. upon the initiation and final completion of construction of each Disposal Pit. The permittee may not begin using the pit until the Corpus Christi District Office has completed an inspection of the pit and provided verification that the pit is constructed in accordance with the application and this permit.
- C. A sign must be posted identifying each Disposal Pit (**P011948** and **P011949**) by name and permit number using letters and numerals at least three inches in height.
- D. The Disposal Pit (**P011948**) Cell 1 must have dimensions no greater than 1,213 feet by 330 feet by 16 feet deep at its deepest point (9.2 acres) with a maximum above grade height of seven feet. The usable capacity must not exceed 1,074,584 barrels or 223,457 cubic yards.
- E. The Disposal Pit (**P011949**) Cell 2 must have dimensions no greater than 1,087 feet by 196 feet by 26 feet deep at its deepest point (4.9 acres) with a maximum above grade height of seven feet. The usable capacity must not exceed 1,069,174 barrels or 222,332 cubic yards.
- F. The total combined final capacity for the Disposal Pits shall not exceed 2,143,758 barrels or 445,789 cubic yards.
- G. The side slopes and the floor of the Disposal Pits (**P011948** and **P011949**) must have at least a 1% slope to allow fluids to drain to the central collection trenches of the Leachate Collection system and the Leak Detection System and then flow to the sump at the low end of each cell.
- H. Berms must be constructed and maintained on all sides of the Disposal Pits (**P011948** and **P011949**) with a slope no steeper than a one to three (vertical to horizontal) ratio and meet compaction criteria specified in Permit Condition IV.H.
- I. The Disposal Pits (**P011948** and **P011949**) must be constructed in accordance with the liner system installation methods included in the application and consist of (from bottom to top) at least 24 inches of clay subgrade overlain with a geotextile, a 60-mil high-density polyethylene (HDPE) secondary liner, a 60-mil HDPE primary liner and 12 inches of a protective soil layer that is not composed of waste. Refer to the “*LINER DETAILS*” (SHEET P-4) diagram provided in **Permit Appendix D**.
- J. The Disposal Pits (**P011948** and **P011949**) must be equipped with a Leachate Collection System (LCS), including a HDPE 200-mil geonet that extends over the entire pit on top of the primary liner and a central collection line and sump with a geotextile filter fabric placed around aggregate drainage material to aid in the transmittal of fluids to the LCS sump, to collect any rainwater that falls within the pit footprint and leachate that percolates through the waste contained therein.
- K. The Disposal Pits (**P011948** and **P011949**) must be equipped with a Leak Detection System (LDS), including a HDPE 200-mil geonet that extends over the entire pit between the primary and secondary liners, as well as a central collection line to aid in the transmittal of fluids to the LDS sump, to collect any leakage from the primary liner.

- L. The liners, the LCS and the LDS must be installed in accordance with the application, the material manufacturer's specification and sound engineering practices.
- M. A liner anchor trench must be used to key the synthetic liners for each cell to their respective berms. The liners must be welded together to create a continuous liner system when the next disposal pit is constructed.
- N. A permanent liner boundary marker must be installed and maintained on all four sides of the pit that clearly identifies the subsurface liner system weld locations at the land surface.
- O. The area surrounding the pit must be graded such that all surfaces slope away from the pit to prevent surface flow storm water from entering the pit.

## VII. OPERATION OF DISPOSAL PITS (P011948 and P011949)

- A. Only one Disposal Pit shall be active and accept oil and gas waste at any time.
- B. The permittee must not construct or use any Disposal Pit (P011948 and P011949) in a manner that could exceed the financial security required by Permit Condition I.B.
- C. All waste shall pass a Paint Filter Test (EPA Method 9095) prior to placement in any Disposal Pit. Test results from each Paint Filter Test must be submitted to Technical Permitting in Austin as part of the Quarterly Report required in Permit Condition I.Y.
- D. Before the Permittee may begin excavation of the next Disposal Pit the previous Disposal Pit must be filled with waste to almost final grade height, and the exposed side abutting the next pit in the construction sequence must be properly graded and prepared to receive waste. The waste in the previous Disposal Pit must be properly graded and prepared for the temporary cap, which will consist of at least 12 inches of soil (not waste) that meets a maximum hydraulic conductivity of  $1 \times 10^{-7}$  centimeters per second and has been compacted to 95% Standard Proctor (ASTM D698) or 90-92% Modified Proctor (ASTM D1557) density. The temporary cap must be graded to prevent ponding on top of the cover and inhibit infiltration of liquids into the waste below.
- E. The temporary cap must be inspected after each storm event and re-compacted as needed to meet the requirements specified in Permit Condition VII.D.
- F. After the temporary cap has been constructed it must be inspected every quarter for erosion, slope stability and thickness of the cover. The results of each inspection must be submitted as part of the Quarterly Report required in Permit Condition I.Y. The physical record must be maintained by the Permittee for the life of the pit.
- G. The Permittee must contact the Corpus Christi District Office to proceed with construction of each disposal pit in the sequence and may not begin accepting waste until:
  - 1. The Permittee has received approval from the District Office to begin accepting waste in the next Disposal Pit sequence; and
  - 2. Waste is no longer being accepted in the previous Disposal Pit Phase and the temporary cap is almost completed.
- H. At least two feet of horizontal freeboard must be maintained at all times between the edge of waste in the active Disposal Pit and the top of the pit dikes.
- I. Prior to the Disposal Pits (P011948 and P011949) accepting waste above grade, the waste collected below grade in each active Disposal Pit Phase must be stabilized, compacted and maintained to prevent collapse of the structure and must not have side slopes steeper than a one to three (vertical to horizontal) ratio.

- J. No freestanding fluids may accumulate in the Disposal Pits (**P011948** and **P011949**). Any fluids must be removed within 72 hours of discovery and disposed of in an authorized manner.
- K. This permit does not authorize the discharge of any oil and gas waste from any Disposal Pit to land surface or surface waterbody.
- L. The leak detection system must be monitored daily, and the highest volume removed from the leak detection system during the seven-day period must be reported. The permittee must maintain a record of when the liner and the leak detection system are inspected and the results of each inspection. This record shall include the:
  - 1. Date of fluid level measuring;
  - 2. Fluid level or volume;
  - 3. Volume of fluid removed;
  - 4. Electrical conductivity; and
  - 5. Chloride concentration of the fluids removed.
- M. The information from Permit Condition VII.L. must be submitted in table form within the Quarterly Report required in Permit Condition I.Y. of this permit. The physical record must be maintained by the permittee for the life of the pit. The physical record shall be filed with the RRC upon request.
- N. If the LDS indicates a possible liner system failure, the liner system must be inspected for deterioration and leaks within five days of the detection of the failure. **The Corpus Christi District Office must be notified by phone or email within 24 hours of detection of the failure. No additional waste shall be added to the Disposal Pits (P011948 and P011949) in the event of a failure.** After inspection, the identified failed component must be replaced or repaired and re-inspected by RRC personnel before resuming use of the pit. A liner system failure is defined as any of the following:
  - 1. Disposal Pit (**P011948**) Cell 1:
    - a. A volume withdrawn from the leak detection system that is greater than 920 gallons per day or 100 gallons per acre per day (GPAD).
    - b. Any failure in the leak detection and return system or any component thereof.
    - c. Any detected damage to or leakage from the secondary liner.
  - 2. Disposal Pit (**P011949**) Cell 2:
    - a. A volume withdrawn from the leak detection system that is greater than 490 gallons per day or 100 gallons per acre per day (GPAD).
    - b. Any failure in the leak detection and return system or any component thereof.
    - c. Any detected damage to or leakage from the secondary liner.
- O. Unless otherwise required by conditions of this permit, construction, use and maintenance of each pit must be in accordance with the information represented on the applications (Form H-11's) and attachments thereto.

#### **VIII. CLOSURE AND CAPPING OF DISPOSAL PITS (P011948 and P011949)**

- A. Final closure and capping of the Disposal Pits (**P011948** and **P011949**) shall be consistent with the "*FINAL CLOSURE*" (SHEET 2-11) diagram provided in **Permit Appendix E**.

- B. Once the Disposal Pits have reached the permitted capacity:
1. Waste material in the Disposal Pits must be stabilized so that the structure will not fail or erode. The RRC reserves the right to require necessary design modifications to increase tensile strength prior to capping and closure to ensure that the waste is stabilized above grade;
  2. Waste material in the Disposal Pits must be graded, stabilized and compacted so that rainwater will not collect on top of the pits;
  3. The final cap must consist of a liner subgrade layer 24 inches thick that meets a hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec or less and is compacted to 95% Standard Proctor (ASTM D698) or 90-92% Modified Proctor (ASTM D1557) density, overlain by a HDPE liner with a thickness of at least 40-mil, overlain by a geocomposite drainage layer with a thickness of at least 200-mil, overlain by a layer of vegetative soil that is at least 18 inches thick, and seeded with appropriate vegetation for the geographic region; and
- C. Unless otherwise required by conditions of this permit, final closure of the Disposal Pits must be consistent with the details as presented in the application. Any modification to the closure or final capping for the Disposal Pits must be submitted and approved by Technical Permitting prior to the modification occurring

#### **IX. CONSTRUCTION AND OPERATION OF THE COLLECTING PIT (P012661)**

- A. The general layout and arrangement of the Collecting Pit (**P012661**) must be consistent with the application and the "*LEACHATE COLLECTION POND*" (SHEET P-5) diagram, received on April 2, 2018, which is attached to and incorporated as part of this permit as **Permit Appendix F**.
- B. Use of the Collecting Pit (**P012661**) is limited to the collection of non-hazardous oil and gas wastes as specified in Permit Condition II.A., leachate, leak detection fluids, and the collection of contact stormwater for processing, staging for evaporation, or disposal by injection in a Class II disposal well. No other oil field fluids or oil and gas wastes may be stored or staged in the pit.
- C. No other oil field fluids or oil and gas wastes may be stored or staged in the pit.
- D. A sign shall be posted identifying the permit number of the Collecting Pit (**P012661**) using letters and numerals at least three inches in height.
- E. The Collecting Pit (**P012661**) must be approximately 256 feet long by 256 feet wide by 10 feet deep. The maximum useable capacity for each pit is 72,025 barrels.
- F. Berms must be constructed and maintained on all sides of the Collecting Pit (**P012661**) with a slope no steeper than a one to three (vertical to horizontal) ratio and meet compaction criteria specified in Permit Condition IV.H.
- G. At least two feet of freeboard must be maintained between the fluid level in each of the pit and the top of the earthen berms.
- H. The pit must be constructed in accordance with the liner installation methods included in the application and consists of at least two feet of clay subgrade overlain with a 30-mil HDPE liner.
- I. The liner must be installed and maintained in accordance with best management and sound engineering practices.

- J. The pit must be emptied and visually inspected annually for deterioration and leaks. A record of this inspection and photographs of the interior of the pit must be maintained and shall be submitted to Technical Permitting in Austin as part of the Quarterly Report required in Permit Condition I.Y. The Corpus Christi District Office must be notified by phone or email at least 48 hours before emptying the pit for inspection.
- K. The synthetic liner must be inspected whenever evidence of liner leakage arises. If inspection of the synthetic liner reveals a leak or other loss of integrity, the waste must be immediately removed. No waste shall be added to the pit until the liner must be replaced or repaired and re-inspected by RRC personnel before resuming use of the pit.
- L. The area surrounding the pit must be graded such that all surfaces slope away from the pit to prevent surface flow stormwater from entering the pit.
- M. This permit does not authorize the discharge of waste from the pit to the ground surface or to surface water.
- N. Unless otherwise required by conditions of this permit, construction, use and maintenance of the pit must be in accordance with the information represented on the application (Form H-11) and attachments thereto.

**X. CONSTRUCTION AND OPERATION OF THE SEPARATION AREA, SETTLING BASIN AND THE COLLECTING/SETTLING PITS (P011946A, P011946B, P011946C, P011947A, P011947B and P011947C)**

- A. The general layout and arrangement of the Separation Area and the Settling Basin shall consist of a reinforced concrete Tank Pad, two Liquified Waste Transfer Ramps, an access pad and six Collecting/Settling Pits (**P011946A, P011946B, P011946C, P011947A, P011947B and P011947C**) and must be consistent with the “*STRUCTURAL SEPARATION AREA PLAN*” (SHEET S-4) and the “*MPS MISCELLANEOUS DETAILS*” (SHEET C-19) diagrams, received on February 8, 2018, which are attached and incorporated into this permit as **Permit Appendix G**.
- B. Use of the Collecting/Settling Pits (**P011946A, P011946B, P011946C, P011947A, P011947B, P011947C**) is limited to the collection of non-hazardous oil and gas wastes as specified in Permit Condition II.A. for processing and disposal in an authorized Class II injection well or placement onto the Collecting/Drying Pit (**P012620**) for further stabilization. No other oil field fluids or oil and gas wastes may be stored or staged in the pit.
- C. A sign shall be posted identifying each Collecting/Settling Pit (**P011946A, P011946B, P011946C, P011947A, P011947B, P011947C**) by name and permit number using letters and numerals at least three inches in height.
- D. The Liquified Waste Transfer Ramps (unloading bays) shall be above grade structures that are each approximately 73 feet wide by 64 feet long and subdivided into five bays. The slab shall be constructed of steel reinforced concrete with a minimum thickness of 12 inches. A concrete curb shall be constructed that is at least 12 inches in height shall be constructed at the entrance of each bays and the ramps should slope toward the Collecting/Settling Pits. Liquid waste is transferred from the directly from the unloading vehicles via closed looped hose system to the Collecting/Settling pits.
- E. The access pad shall be located between the Collecting/Settling Pits (**P011946A, P011946B, P011946C, P011947A, P011947B and P011947C**) to allow machinery to access the pits. The Access Pad must be approximately 98 feet long by 24 feet wide and be constructed of at least 10 inches of steel reinforced concrete.

- F. Collection/Settling Pits **P011946A** and **P011947A** must be approximately 50 feet long by 40 feet wide by 14 feet deep. Each pit must be lined with reinforced concrete with a minimum thickness of 12 inches. The useable capacity for each pit must not exceed 4,275 barrels.
- G. Collection/Settling Pits **P011946B** and **P011947B** must be approximately 24 feet long by 40 feet wide by 14 feet deep. Each pit must be lined with reinforced concrete with a minimum thickness of 12 inches. The useable capacity for each pit must not exceed 2,052 barrels.
- H. Collection/Settling Pits **P011946C** and **P011947C** must be approximately 20 feet long by 40 feet wide by 14 feet deep. Each pit must be lined with reinforced concrete with a minimum thickness of 12 inches. The useable capacity for each pit must not exceed 1,710 barrels.
- I. The total combined permitted capacity for all six Collecting/Settling Pits shall not exceed 16,074 barrels.
- J. At least two feet of freeboard must be maintained between the fluid level in each of the pits and the top of the pit wall.
- K. The pits must be constructed in accordance with the liner installation methods included in the application and consist of a prepared subgrade reinforced concrete liner with a minimum thickness of 12 inches.
- L. The liners must be installed and maintained in accordance with the application, best management and sound engineering practices.
- M. The pits must be emptied and visually inspected annually for deterioration and leaks. A record of this inspection and photographs of the interior of the pits must be maintained and shall be submitted to Technical Permitting in Austin as part of the Quarterly Report required in Permit Condition I.Y. The Corpus Christi District Office must be notified by phone or email at least 48 hours before emptying the pits for inspection.
- N. The concrete liner must be inspected whenever evidence of liner leakage arises. If inspection of the concrete liner reveals cracking, a leak or other loss of integrity, the waste must be immediately removed. No waste shall be added to the affected Collecting/Settling Pit(s) until the concrete liner has been replaced or repaired and re-inspected by RRC personnel before resuming use of the pit(s).
- O. The area surrounding the pits must be graded such that all surfaces slope away from the pits to prevent surface flow of stormwater from entering the pits.
- P. This permit does not authorize the discharge of waste from the pits to the ground surface or to surface water.
- Q. Unless otherwise required by conditions of this permit, construction, use and maintenance of each pit must be in accordance with the information represented on the application (Form H-11) and attachments thereto.

#### **XI. CONSTRUCTION AND OPERATION OF THE WORKING AREA**

- A. The general layout and arrangement of the Working Area shall consist of a concrete pad with two Solid Waste Transfer Ramps and must be consistent with the "*BLACKHORN MATERIAL PROCESSING AREA*" (SHEET P-2) diagram provided in **Permit Appendix B** and the "*STRUCTURAL SEPARATION AREA PLAN*" (SHEET S-4) diagram provided in **Permit Appendix G** and the "*WORKING AREA AND SEPARATION AREA*" (SHEET SE-DPa218.dgn) diagram, received on April 2, 2018, which is attached and incorporated into this permit as **Permit Appendix H**.

- B. The Working Area and Perimeter Collection Channel must be constructed in accordance with the liner system installation methods included in the application and consist of at least 24 inches of compacted clay that is overlain with at least 10 inches of steel reinforced concrete. The floor of the Working Area must be sloped to allow fluids to drain to the Perimeter Collection Channel.
- C. The Perimeter Collection Channel shall be constructed to allow waste fluid and contact stormwater from the Working Area to gravity flow to Collecting/Settling (**P011946A**, **P011947A**) and shall not accumulate or store waste or contact stormwater.
- D. The Solid Waste Transfer Ramps shall be constructed of at least 10 inches of steel reinforced concrete and provide access to the Working Area for solid waste transfer.
- E. The Working Area may receive high solids content waste that is delivered to the facility, dredged solids from the collecting pits, and solids from the Separation Area tanks. Waste will be received in an open-top skid mounted auger bottom receiving trough which loads a centrifugal dryer. Waste from the centrifugal dryer may be fed to a centrifuge for additional separation. Once the solid waste is sufficiently dry, it is conveyed via conveyor belt into trucks for transport to the active disposal cell. No waste will be placed or stored directly on the floor of the Working Area Pad.
- F. The Working Area must be emptied and visually inspected annually for deterioration and leaks. A record of this inspection and photographs of the interior of the Working Area must be maintained and shall be submitted to Technical Permitting in Austin as part of the Quarterly Report required in Permit Condition I.Y. The Corpus Christi District Office must be notified by phone or email at least 48 hours before emptying the Working Area for inspection.

## **XII. STORMWATER MANAGEMENT**

- A. The general layout and arrangement of the stormwater management structures, which includes the noncontact stormwater pond and drainage diversion channels, shall be consistent with the "*SITE PLAN*" (SHEET P-1) diagram provided in **Permit Appendix B**.
- B. Berms and other containment structures must be constructed around all waste management units and storage areas. These structures must be used to divert non-contact stormwater around the waste management areas and isolate and contain contact stormwater within the waste management units. Spills and releases into the interior ditches must be contained and removed immediately to prevent contact with stormwater.
- C. All above ground storage tanks must be contained within dikes. Dikes must be constructed and maintained at a minimum to contain the largest tank's maximum capacity, plus freeboard to contain a 25-year, 24-hour storm event volume for Jim Wells County as specified in the Permit Conditions IV.F. and IV.I.
- D. In the event that contact storm water enters the Storm Water Retention Pond the permittee must submit a written report detailing the event to Technical Permitting in Austin before disposing of the contents of the pond. Contact storm water must be removed and disposed of in an authorized manner
- E. Contact stormwater must be contained within the waste management units. Any accumulated contact stormwater must be removed and disposed of in an authorized manner.
- F. A discharge permit from the EPA may be required for non-contact stormwater discharges. If required, the permit from the EPA must be in place prior to commencement of discharge operations.

**XIII. GROUNDWATER MONITORING**

- A. Four (4) groundwater monitor wells must be installed at the facility prior to receiving waste deliveries. The monitor wells are to be installed at the locations designated on the “*SITE PLAN*” (SHEET P-1) diagram provided in **Permit Appendix B**.
1. The wells must be completed to penetrate the shallowest groundwater zone, and the completion must isolate that zone from any deeper groundwater zone.
  2. The screened interval of the wells must be designed to intercept at least five feet of groundwater.
  3. Provision must be made to protect the well heads from damage by vehicles and heavy equipment.
  4. The wells must be water tight at the surface and fitted with a lockable water tight expansion cap.
  5. The groundwater monitoring wells must be able to provide a representative sample of groundwater underlying the site for the duration of facility operations. If a groundwater monitoring well is not capable of providing a representative sample, the permittee must notify Technical Permitting in Austin and install a replacement monitor well that is acceptable to Technical Permitting.
  6. The following information must be submitted after the wells are completed:
    - a. A soil boring lithologic log for the well, with the soils described using the Unified Soil Classification System (equivalent to ASTM D 2487 and 2488). The log must also include the method of drilling, well specifications, slot size, riser and screen length, bentonite and cement intervals, total depth, and the top of the first encountered water or saturated soils.
    - b. A well installation diagram detailing construction specification for each well, including riser and screen length, screen slot size, bentonite and cement intervals. The sand pack size should be compatible with the well screen slot size and the local lithology.
    - c. A survey elevation for each well head reference point (top of casing) relative to a real or arbitrary on-site benchmark and relative to mean sea level.
    - d. A potentiometric contour map showing static water levels and the estimated direction of groundwater flow and the calculated gradient.
- B. The groundwater monitor wells must be sampled and monitored for the following parameters after installation and quarterly thereafter:

<u>PARAMETER</u>	<u>UNITS</u>
Static Water Level	Feet (ft)
Total Depth	ft
Benzene <i>(EPA Method 8260/8021B or equivalent)</i>	mg/L
Total Petroleum Hydrocarbon (TPH) <i>(Method TX1005)</i>	mg/L
Total Dissolved Solids (TDS) <i>(Standard Method 160.1 or equivalent)</i>	mg/L

<u>PARAMETER</u>	<u>UNITS</u>
pH <i>(EPA Method 150.1 or equivalent)</i>	s.u.
Soluble Cations: Calcium, Magnesium, Potassium, and Sodium <i>(EPA Method 6020 or equivalent)</i>	mg/L
Soluble Anions: Bromides, Carbonates, Chlorides, Nitrates, and Sulfates <i>(EPA Method 300 or equivalent)</i>	mg/L

- C. The groundwater quality sampling results required by Permit Condition XIII.B. must be filed with Technical Permitting as part of the Quarterly Report required by Permit Condition I.Y. The laboratory analytical reports and the corresponding chain of custody shall be provided for all chemical analyses performed.

#### **XIV. FACILITY CLOSURE**

- A. Technical Permitting and the Corpus Christi District Office must be notified in writing at least 45 days prior to commencement of final closure activities. The permittee must submit a closure plan to Technical Permitting in Austin to be reviewed and approved prior to beginning closure activities.
- B. At facility closure, all waste, chemicals and waste related materials must be and/or removed from the facility for authorized reuse or disposed of in an authorized manner.
- C. Waste processing equipment, above ground storage tanks and any other equipment not associated with the maintenance of the facility must be removed.
- D. Provisions must be taken to prevent erosion both during and following site closure.
- E. Excluding the Disposal Pits (**P011948** and **P011949**) and the Collecting Pit (**P012661**), the entire facility must be backfilled as necessary, contoured to original grade and revegetated with ground cover appropriate for the geographic region.
- F. Closure of the Collecting/Drying Pit (**P012620**), Working Area, Separation Area, Settling Basin and the Collecting/Settling Pits (**P011946A**, **P011946B**, **P011946C**, **P011947A**, **P011947B** and **P011947C**) shall be as follows:
1. The contents of all tanks, vessels or other containers must be disposed of in an authorized manner.
  2. All non-maintenance related equipment must be removed and salvaged, if possible, or disposed of in an authorized manner.
  3. The concrete areas, concrete pits, concrete pads and access roads shall be cleaned and demolished, and the concrete rubble and wash-water must be disposed of in an authorized manner.
  4. The pits must be dewatered, emptied, demolished, backfilled, compacted and properly closed. All wastes, including the liners, must be removed and disposed of in an authorized manner.
  5. Twelve (12) inches of soil from beneath the concrete unloading bays, concrete liners, concrete aprons and all visually contaminated soils from beneath the synthetic pit liners

shall be excavated and removed. The contaminated soil must be disposed of in an authorized manner.

6. Once waste removal is completed from the waste handling areas, a soil sampling plan must be submitted to Technical Permitting to characterize the scope of any residual contamination at the facility. After the removal of wastes, composite soil samples must be taken comprised of a minimum of four representative soil samples per former pit location, and five representative soil samples per acre. Samples must be taken from around and underneath the Collecting Pit Areas, the Truck Washout Ramp, the Liquified Waste Transfer Ramps, the Solid Waste Transfer Ramp and the Working Area.
  7. Soil Samples required by Permit Condition XIV.F.6. must be analyzed for the analytical parameters listed in Permit Condition XIV.G., and the specific parameter limitations shall not be exceeded. If any Parameter Limitation is exceeded, additional waste must be removed from that location, and the area must be resampled. The process must be repeated until the analytical results meet criteria.
- G. Soil samples required by Permit Condition XIV.F.6. must be analyzed for the following parameters and shall not exceed the specified limitations:

<u>PARAMETER</u>	<u>LIMITATION</u>
pH <i>(EPA Method 9045C or equivalent)</i>	6 to 10 standard units
Electrical Conductivity (EC) <sup>1</sup>	≤ 4.0 mmhos/cm
Total Petroleum Hydrocarbon (TPH) <i>(EPA Method 5035A/TX1005)</i>	≤ 10,000 mg/kg or 1 % by weight
Total Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) <i>(EPA Method 5035A/8021/8260B)</i>	≤ 30 mg/kg
Metals (Total) <i>(EPA Method 6010/6020/7471A)</i>	
Arsenic	≤ 10 mg/kg
Barium	≤ 10,000 mg/kg
Cadmium	≤ 10 mg/kg
Chromium	≤ 100 mg/kg
Lead	≤ 200 mg/kg
Mercury	≤ 10 mg/kg
Selenium	≤ 10 mg/kg
Silver	≤ 200 mg/kg

<sup>1</sup> Louisiana Department Natural Resources (LDNR) Lab Procedures for Extraction and Analysis of Exploration and Production (E&P) Waste or equivalent

- H. A summary of the soil sampling required by Permit Condition XIV.F.6 must include:
1. A map drawn to scale with coordinates of the sampling locations;
  2. A table indicating the results of the parameters sampled;
  3. The date of sampling;
  4. The approximate depth of the sample below land surface; and

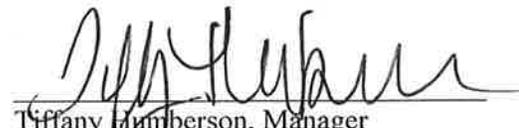
5. Copies of the laboratory analytical reports and chain of custody.
- I. Any soil sample that exceeds the parameter limitations specified in Permit Condition XIV.G. is considered waste and must be disposed of at an authorized disposal facility.
- J. Once the results of the closure activities have been approved by the RRC, all pits, excluding the Disposal Pit and Non-Contact Stormwater Retention Pond, must be dewatered, emptied, demolished, backfilled and compacted within 120 days of final cessation of use of each pit. Final surface grading of the pits and the storage tank battery areas must be accomplished in such a manner that rainfall will not collect at these former locations. Upon final closure, the appropriate District Office and Technical Permitting in Austin shall be notified in writing.

## **XV. POST-CLOSURE CARE AND MONITORING**

- A. In accordance with 16 TAC § 3.78 the permittee shall maintain financial security in the amount of **\$1,750,340.00** after the facility has met all specified closure requirements and the Disposal Pits have been properly capped for the post-closure monitoring period in accordance with this permit. Technical Permitting reserves the right to revise this amount, as necessary. Prior to closure an updated post-closure cost estimate must be submitted to Technical Permitting in Austin, and any additional financial security must be filed with and approved by the RRC prior to the operating financial security referenced in Permit Condition I.B. being released.
- B. The site will be monitored for a period of no less than five years after closure of the facility.
- C. Any areas showing signs of erosion, slumping and instability must be contoured, backfilled, and reseeded as necessary.
- D. Once the facility is no longer in operation, the stormwater must be handled in a manner that is consistent with the information submitted with the application.
- E. All groundwater monitoring wells must remain operational, and monitoring requirements must continue as specified in Permit Condition XIII.B. until written approval from Technical Permitting in Austin is granted for plugging and abandoning the wells.
- F. The leak detection system and the leachate collection system for the Disposal Pits must be maintained and monitored quarterly. Any leachate detected must be reported, collected and disposed of in an authorized manner.
- G. Post-closure care must include quarterly inspections of the entire facility by a Texas registered Professional Engineer for signs of deterioration.
- H. A summary of the results of the post-closure monitoring activity must be submitted to Technical Permitting in Austin as part of a Quarterly Report required in Permit Condition I.Y.
- I. The permittee must request in writing permission to cease post-closure monitoring. Post-closure monitoring requirements may be extended by Technical Permitting based on the monitoring results.

This authorization is granted subject to review and cancellation should investigation show that such authorization is being abused.

**APPROVED AND ISSUED ON:** May 31, 2018



Tiffany Humberston, Manager  
Environmental Permits & Support  
Technical Permitting

**Attachments:** Permit Appendices A through H

**Notes:**

1. The amendment includes permit conditions for two new pits (**P012620** and **P012661**).
2. The permit language has been updated to be consistent with changes in standard permitting.

cc: RRC – District 04, Corpus Christi  
RRC – Austin, Production Audit

# **PERMIT APPENDIX A**

APPLICATION FOR PERMIT TO OPERATE A  
RECLAMATION PLANT  
(FORM R-9)

RAILROAD COMMISSION OF TEXAS  
Oil and Gas Division

APPLICATION FOR PERMIT TO OPERATE  
A RECLAMATION PLANT

R-9  
2/7/90

READ INSTRUCTIONS ON BACK

DRAFT

(TRANSFER) R9 04-1301

1. OPERATOR NAME exactly as shown on P-5, Organization Report <b>BLACKHORN ENVIRONMENTAL SVS, LLC</b>	2. OPERATOR P-5 NO. 073151	3. RRC DISTRICT NO. 04	4. COUNTY OF PLANT LOCATION JIM WELLS
5. OPERATOR ADDRESS, including city, state, and zip code 711 N CARANCHUA ST, STE 1130 CORPUS CHRISTI, TX 78401	6. PURPOSE OF FILING <input checked="" type="checkbox"/> New permit for new facility. Estimated completion date: _____ <input type="checkbox"/> New permit for assisting facility. Name of previous operator: _____ <input type="checkbox"/> One-time renewal of existing permit serial/registration (R-2) no. _____		
7. TYPE OF FACILITY <input checked="" type="checkbox"/> Permanent <input type="checkbox"/> Portable	8. Driving directions from the nearest town (identify town) FROM ORANGE GROVE, TX, DRIVE SOUTH ON TX-359W 2.9 MILES TO COUNTY ROAD 308. TURN WEST ON COUNTY ROAD 308 AND DRIVE APPROXIMATELY 3.2 MILES TO SITE		
9. Brief description of treating process			
10. Material transported to plant in: (see Inst. No. 6) <input type="checkbox"/> vehicles owned by applicant <input checked="" type="checkbox"/> for-hire vehicles <input type="checkbox"/> both applicant's and for-hire vehicles			
11. Identify all oil and/or gas-related facilities located within 100 yards of facility. (example: well, pipeline, saltwater disposal facility, tank battery, etc.)			
TYPE OF FACILITY N/A	OPERATOR	TYPE OF FACILITY	OPERATOR
CERTIFICATION. I certify under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that it was prepared by me or under my supervision and direction, and that the data and facts stated herein are true, correct, and complete to the best of my knowledge.		 SIGNATURE Jason Cody Bates NAME (print or type)	
		Member TITLE (361) 813-7402 PHONE 11/19/15 DATE	

TO BE COMPLETED BY RAILROAD COMMISSION PERSONNEL

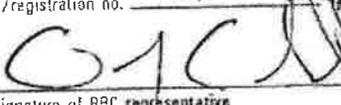
This permit is valid until cancellation under either of the following conditions:

- The above named operator requests cancellation in writing.
- The commission cancels the permit after notice and opportunity for hearing because
  - the permit facility has been inactive for 12 months; or
  - there has been a violation or a violation is threatened of any provision of the permit, the conservation laws of the state, or rules or orders of the Commission.

This permit is non-transferable. The financial assurance filed in support of this application shall be renewed and continued in effect until its conditions have been met or release is authorized by the Commission. The facility schematic diagram is to be kept with this permit. Permit and diagram are to be kept at facility.

RECEIVED  
RRC OF TEXAS  
DEC 04 2015  
O & G  
AUSTIN, TX

Serial/registration no. R9 04-1301 is issued/renewed effective December 30, 2016 (date)

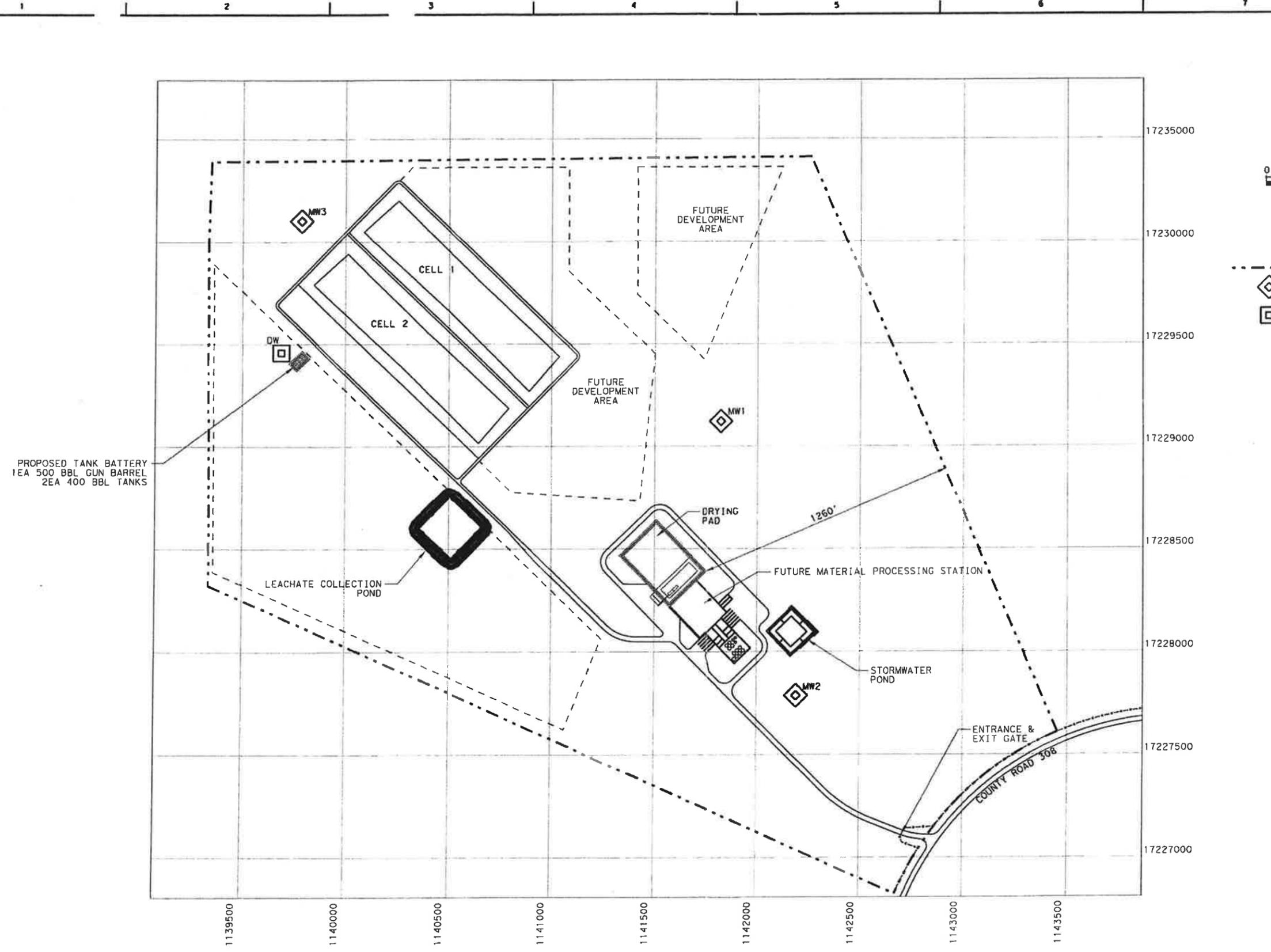
by  Grant Chubb (Name (type or print)) (512) 463-9354 (Phone No.)

ALL WASTES GENERATED BY RECLAIMING OPERATIONS SHALL BE DISPOSED OF IN ACCORDANCE WITH STATEWIDE RULES, 8, 9, AND 46 (RELATING TO WATER PROTECTION, DISPOSAL WELLS, AND FLUID INJECTION)

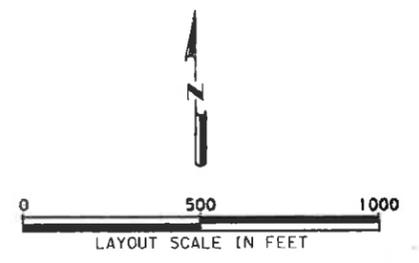
# **PERMIT APPENDIX B**

**SITE PLAN  
(SHEET P-1)**

**BLACKHORN MATERIAL PROCESSING AREA  
PLAN  
(SHEET P-2)**



PROPOSED TANK BATTERY  
1EA 500 BBL GUN BARREL  
2EA 400 BBL TANKS



- LEGEND**
- APPROXIMATE SITE BOUNDARY
  - MONITORING WELL LOCATIONS
  - DISPOSAL WELL

NOTE: SITE IS 233.49 ACRES

DATE: 3/23/2018  
TIME: 10:05:09 AM  
USER: DVOGT  
FILE:

HDR  
Firm Registration No. F-754  
17111 Preston Road, Suite 300  
Dallas, Texas 75248-1229  
972.960.4400

ISSUE	DATE	DESCRIPTION
0	12/15/2017	ISSUED FOR PERMITTING

PROJECT MANAGER	D.VOGT
CIVIL ENGINEER	
CHECKED BY	
DESIGNED BY	B.COX
DRAWN BY	B.COX
QA/QC	
PROJECT NUMBER	

3-23-18

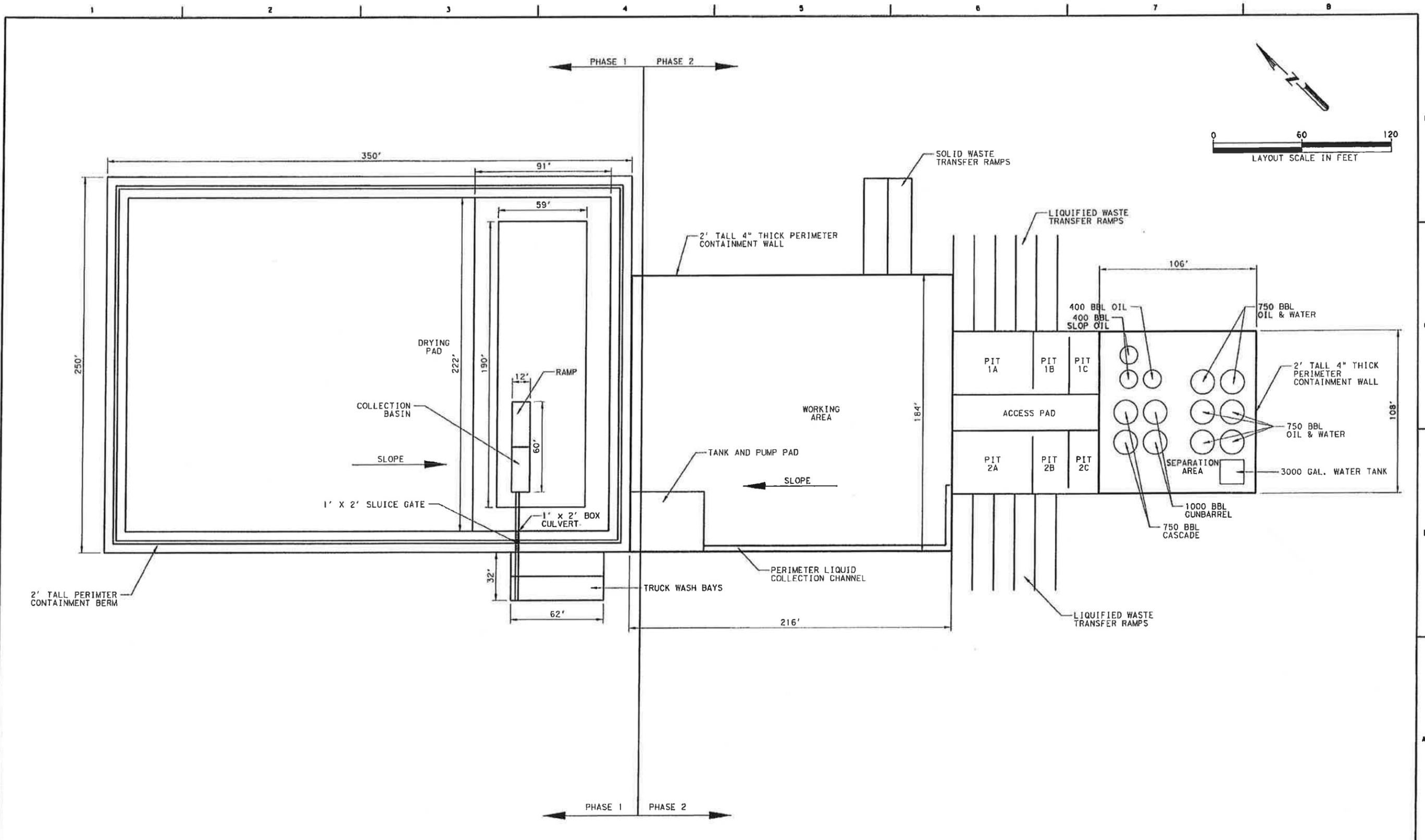
**BLACKHORN ENVIRONMENTAL SVS, LLC**  
JIM WELLS COUNTY, TEXAS

FOR PERMITTING ONLY. NOT FOR  
BIDDING, OR CONSTRUCTION.

**SITE PLAN**

FILENAME	SITE PLAN	SHEET
SCALE		<b>P-1</b>

RECEIVED  
 RRC OF TEXAS  
 12/16/2018  
 D.D. DEAS  
 2018  
 JIM, TX  
 O&A  
 APPROVED



DATE: 3/9/2018  
 TIME: 10:19:12 AM  
 USER: DVOGT  
 FILE:

**HDR**  
 HDR  
 Firm Registration No. F-754  
 17111 Preston Road, Suite 300  
 Dallas, Texas 75248-1229  
 972.960.4400

ISSUE	DATE	DESCRIPTION
0	12/15/2017	ISSUED FOR PERMITTING

PROJECT MANAGER	D.VOGT
CIVIL ENGINEER	
CHECKED BY	
DESIGNED	B.COX
DRAWN BY	B.COX
QA/QC	
PROJECT NUMBER	

STATE OF TEXAS  
 PROFESSIONAL ENGINEER  
 DAVID G. VOGT  
 93905  
 3-9-2018

BLACKHORN ENVIRONMENTAL SVS, LLC  
 JIM WELLS COUNTY, TEXAS  
 FOR PERMITTING ONLY. NOT FOR  
 BIDDING, OR CONSTRUCTION.

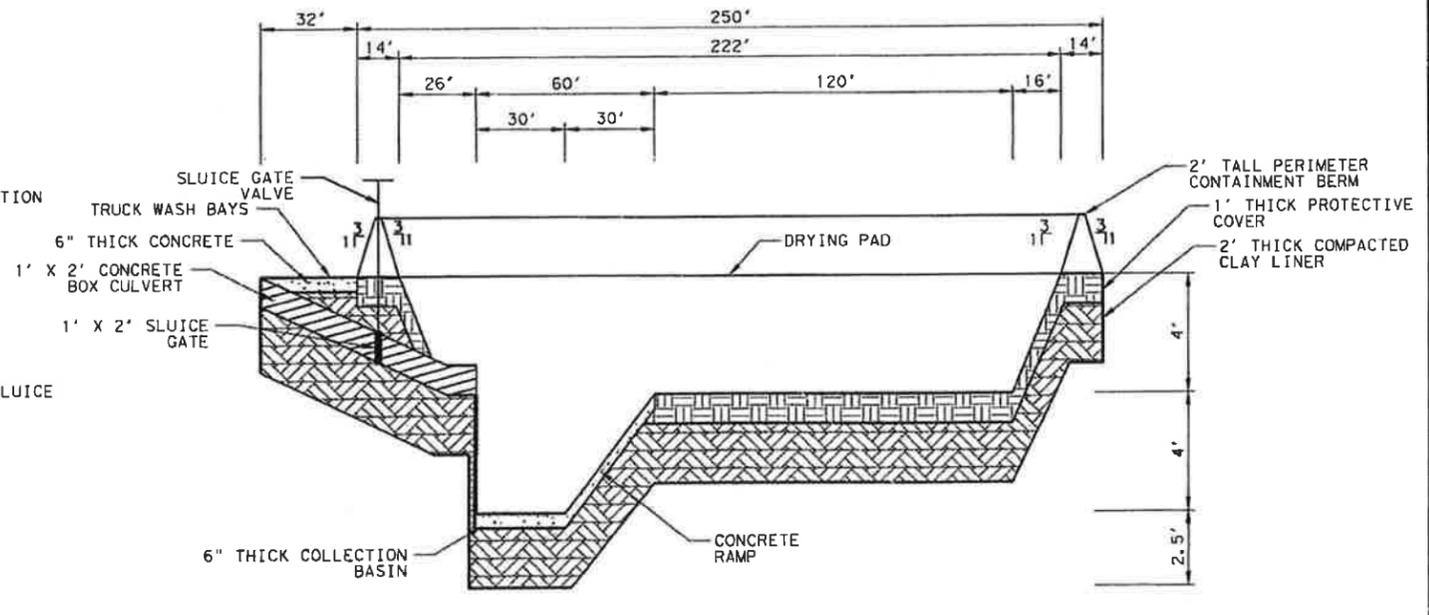
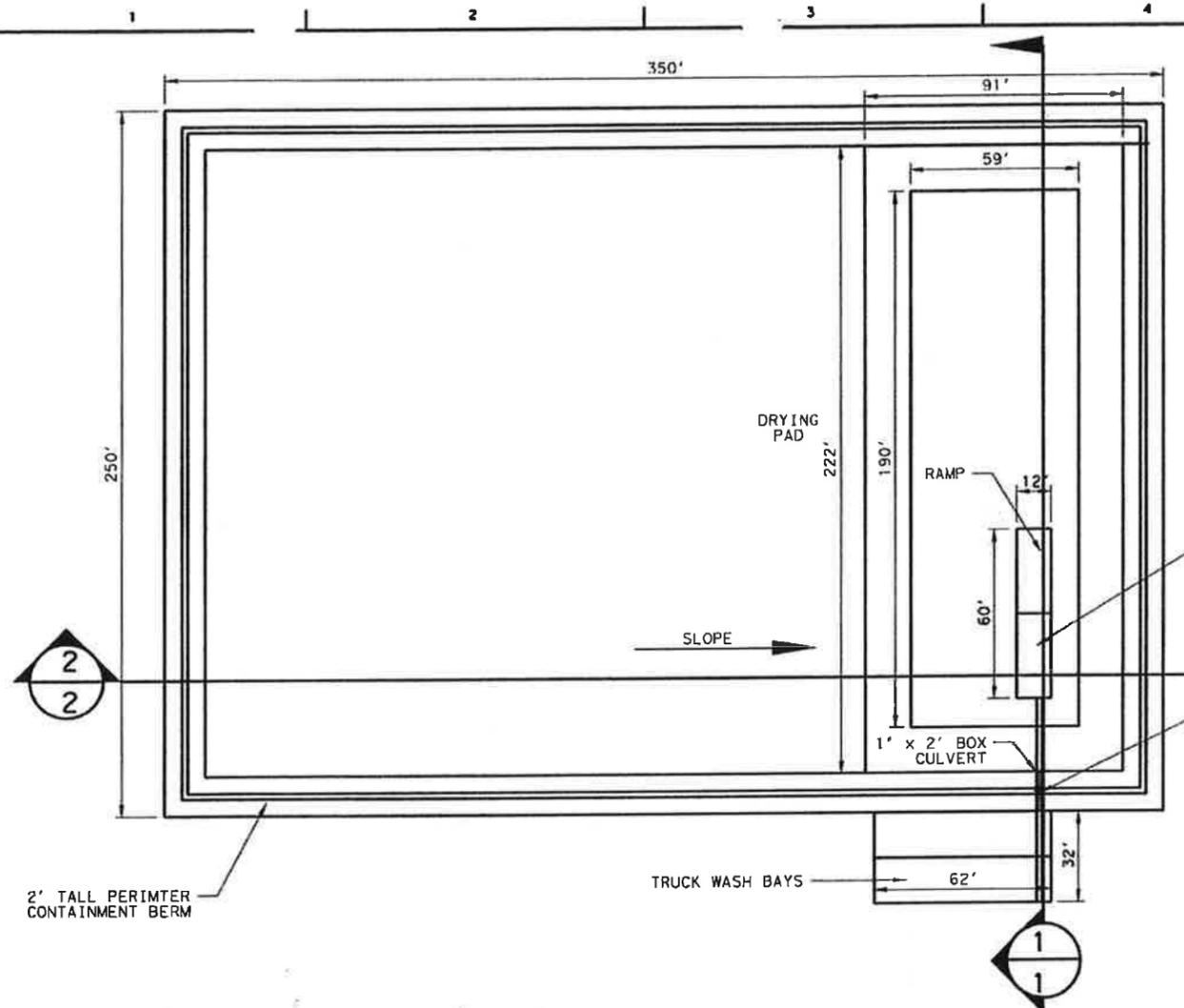
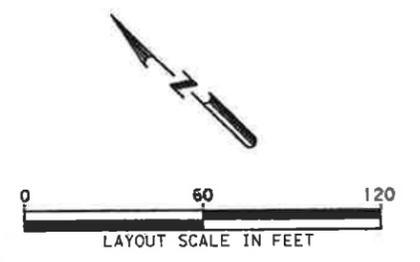
**BLACKHORN MATERIAL PROCESSING AREA PLAN**

FILENAME	MATL_PROCESSING_AREA	SHEET
SCALE		P-2

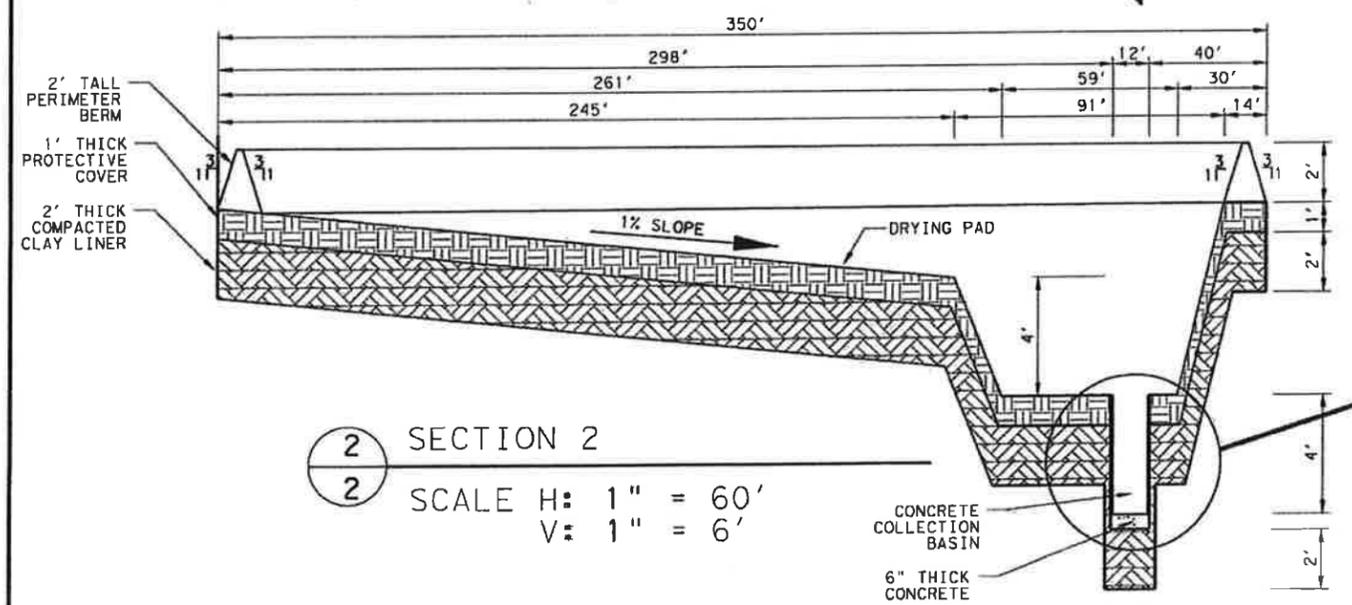
# PERMIT APPENDIX C

DRYING PAD CROSS SECTIONS  
(SHEET P-3)

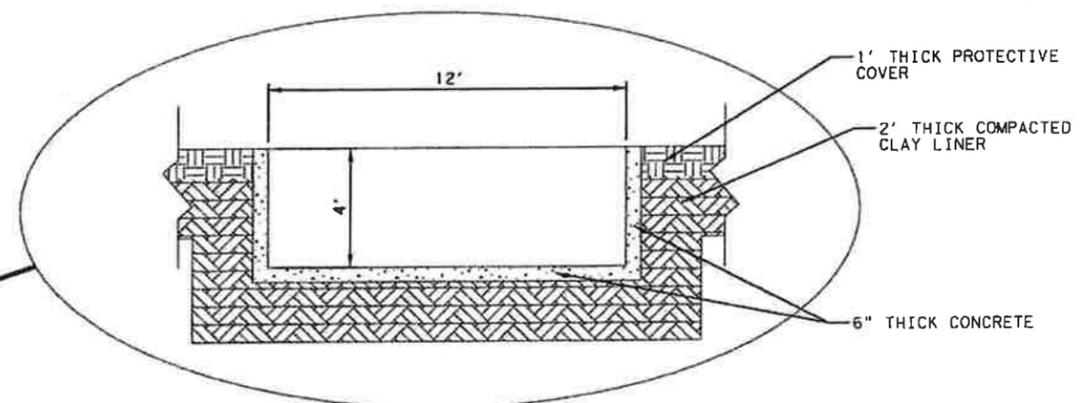
RECEIVED  
 REC OF TEXAS  
 JUN 02 2018  
 O & G  
 AUSTIN, TX



SECTION 1  
 SCALE H: 1" = 60'  
 V: 1" = 6'



SECTION 2  
 SCALE H: 1" = 60'  
 V: 1" = 6'



CONCRETE COLLECTION BASIN  
 SCALE H: 1" = 6'  
 V: 1" = 6'

DATE: 12/18/2017  
 TIME: 2:15:57 PM  
 USER: DVOGT  
 FILE:

**HDR**  
 HDR  
 Firm Registration No. F-754  
 17111 Preston Road, Suite 300  
 Dallas, Texas 75248-1229  
 972.960.4400

ISSUE	DATE	DESCRIPTION
0	12/15/2017	ISSUED FOR PERMITTING

PROJECT MANAGER	D.VOGT
CIVIL ENGINEER	
CHECKED BY	
DESIGNED BY	
DRAWN BY	
QA/QC	
PROJECT NUMBER	

STATE OF TEXAS  
 DAVID C. VOGT  
 83508  
 PROFESSIONAL ENGINEER  
 12/18/17

BLACKHORN ENVIRONMENTAL SVS, LLC  
 JIM WELLS COUNTY, TEXAS  
 FOR PERMITTING ONLY. NOT FOR  
 BIDDING, OR CONSTRUCTION.

**DRYING PAD CROSS SECTIONS**

FILENAME	BLACKHORN DRYING PAD	SHEET
SCALE		<b>P-3</b>

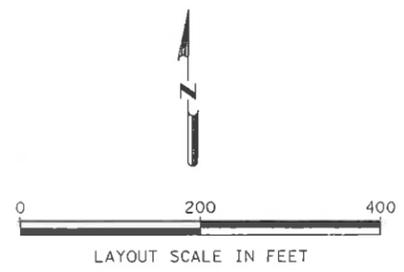
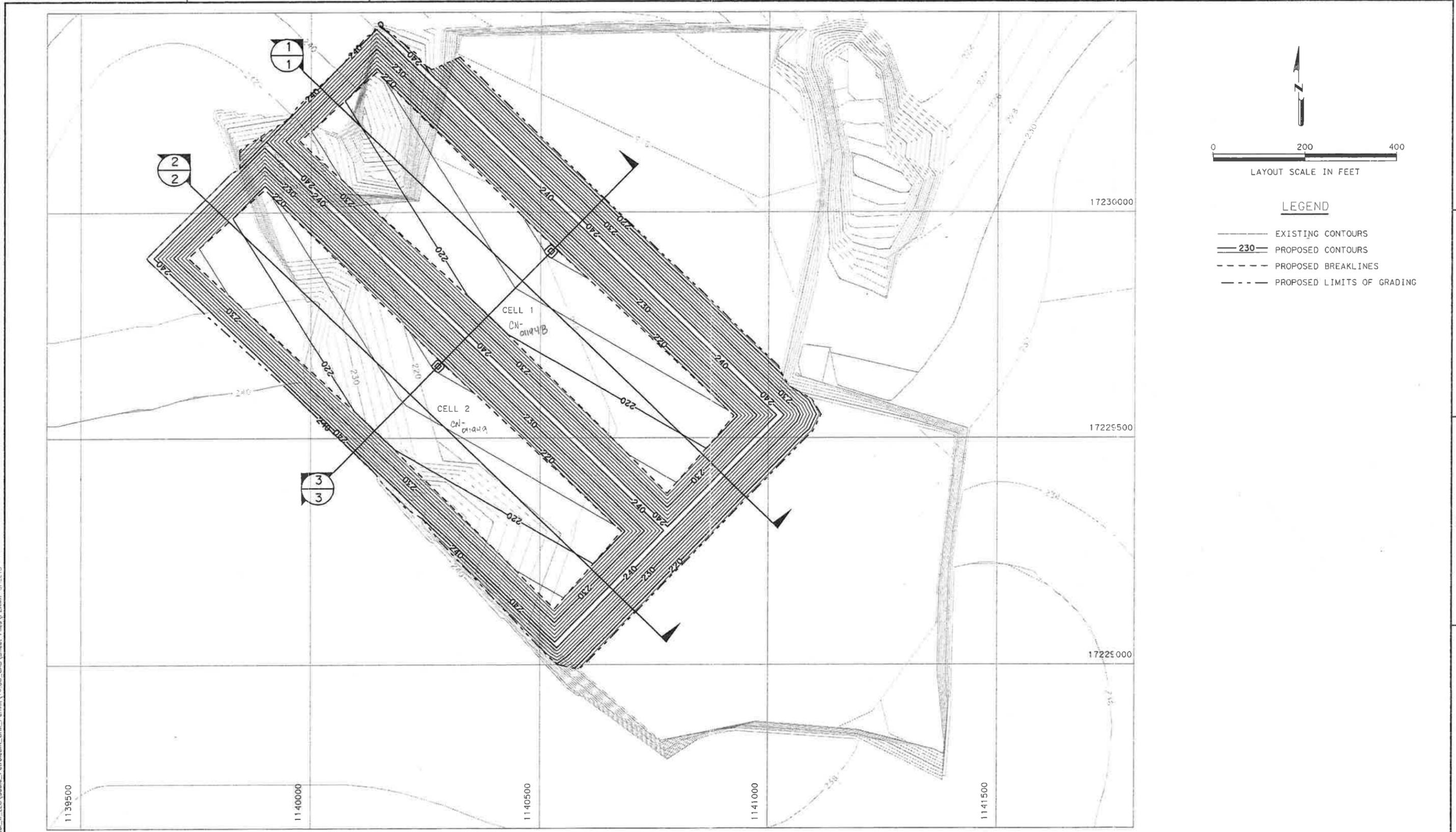
# **PERMIT APPENDIX D**

CELL DESIGN  
(SHEET 2-4)

CELL 1 AND 2 CROSS SECTIONS  
(SHEET 2-5)

LINER DETAILS  
(SHEET P-4)

DATE: 1/25/2013  
 TIME: 2:41:27 PM  
 USER: rcox  
 FILE: Sable\_Environmental\_II\_ILCA\_Sable\_Petroleum\_Drill\_Permit\13\_00\_CAD\Sheet\_Files\PERMIT\_SHEETS



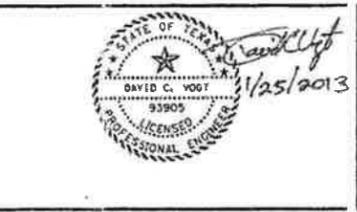
**LEGEND**

- EXISTING CONTOURS
- 230 — PROPOSED CONTOURS
- - - PROPOSED BREAKLINES
- - - PROPOSED LIMITS OF GRADING



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	D.VOGT
CIVIL ENGINEER	
CHECKED BY	
DESIGNED	B.COX
DRAWN BY	B.COX
QA/QC	
PROJECT NUMBER	



**SABLE ENVIRONMENTAL II, LLC**  
**JIM WELLS COUNTY, TEXAS**

**FOR PERMITTING ONLY.**  
**NOT FOR BIDDING OR CONSTRUCTION**

<b>CELL DESIGN</b>	
FILENAME	SE_CD01.dgn
SCALE	
SHEET	<b>24</b>

DATE: 1/25/2013  
 TIME: 2:41:30 PM  
 USER: rcox  
 FILE: Sable\_Environmental\_II\_LLC\CAU\Sheet\Files\PERMIT\_SHEETS



ISSUE	DATE	DESCRIPTION

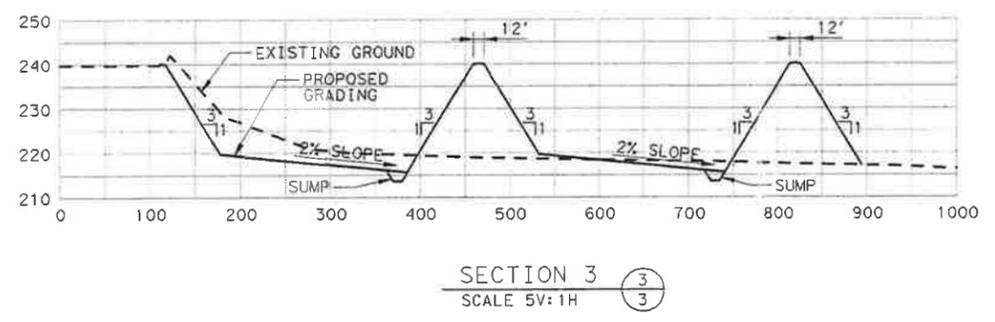
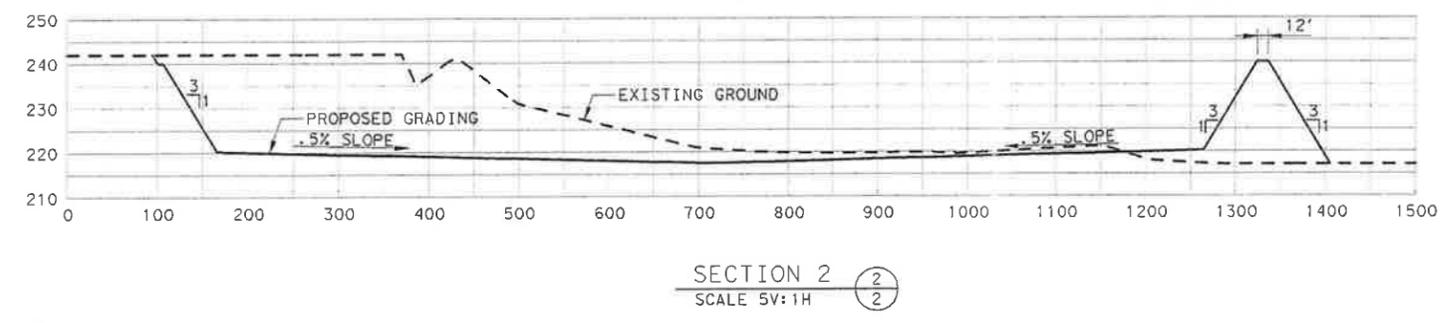
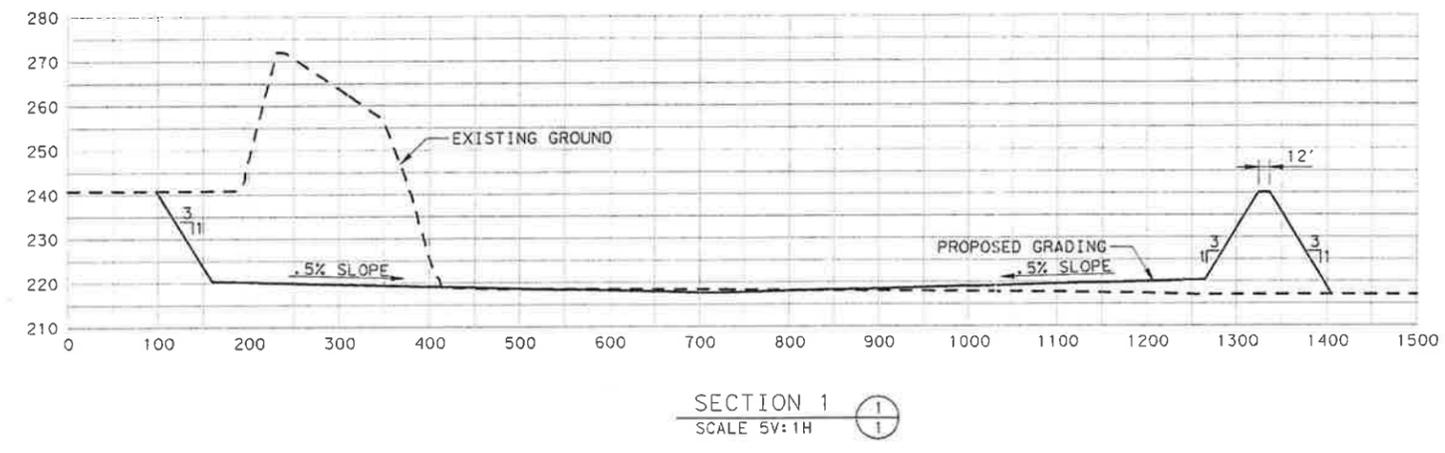
PROJECT MANAGER	D.VOGT
CIVIL ENGINEER	
CHECKED BY	
DESIGNED	B.COX
DRAWN BY	B.COX
QA/QC	
PROJECT NUMBER	

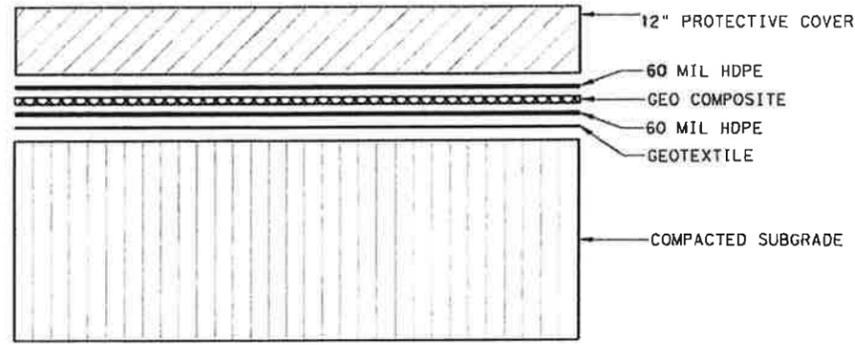


**SABLE ENVIRONMENTAL II, LLC**  
**JIM WELLS COUNTY, TEXAS**

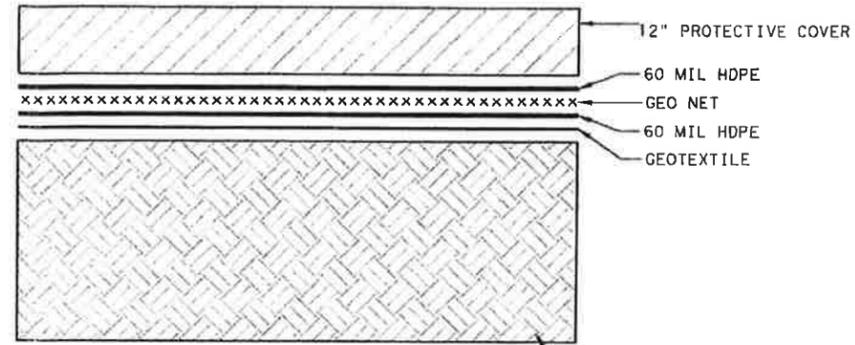
FOR PERMITTING ONLY.  
 NOT FOR BIDDING OR CONSTRUCTION

<b>CELL 1 AND 2 CROSS SECTIONS</b>	
FILENAME	SE_CDXS01.dgn
SCALE	
SHEET <b>2-5</b>	

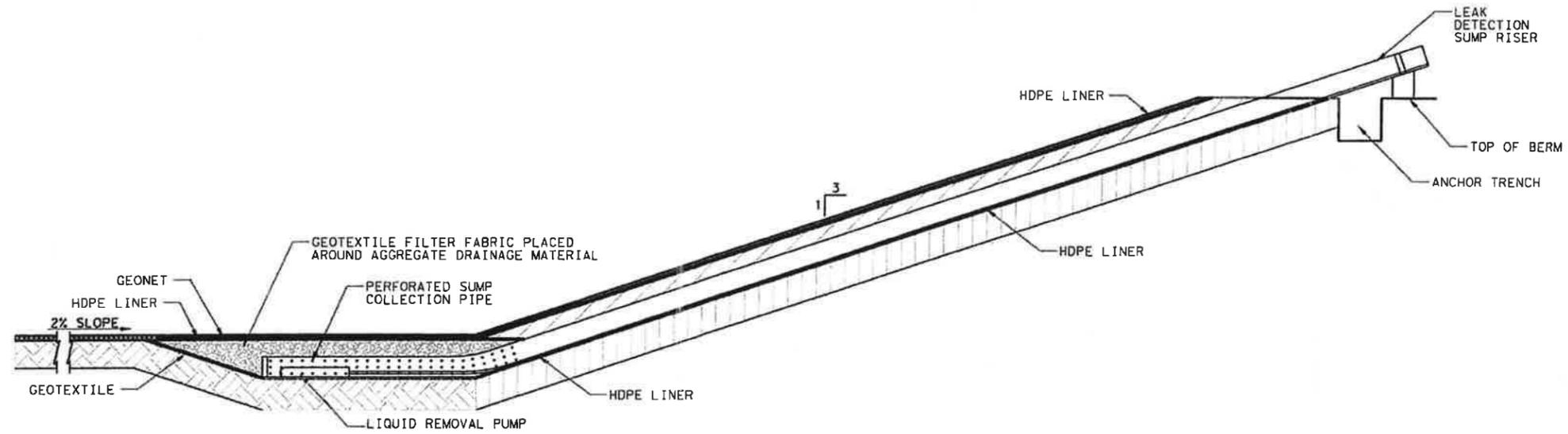




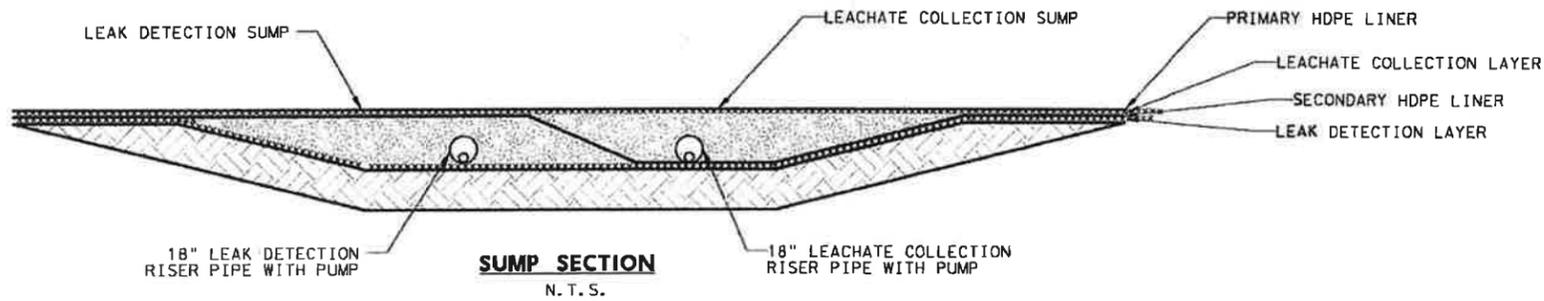
**SIDE SLOPE LINER SECTION**  
N. T. S.



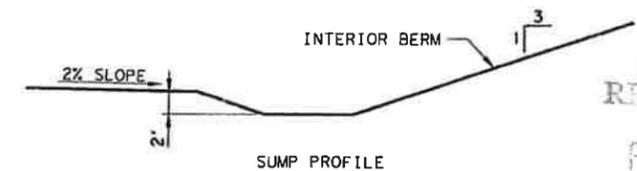
**FLOOR LINER SECTION**  
N. T. S.



**LEACHATE COLLECTION / LEAK DETECTION PIT SECTION**  
N. T. S.



**SUMP SECTION**  
N. T. S.



**SUMP PROFILE**  
**SUMP DETAIL**  
N. T. S.

RECEIVED  
RRC OF TEXAS  
FEB 01 2018  
O & B  
AUSTIN, TX

DATE: 12/18/2017  
TIME: 2:07:09 PM  
USER: DVOGT  
FILE:

**HDR**  
HDR  
Firm Registration No. F-754  
17111 Preston Road, Suite 300  
Dallas, Texas 75248-1229  
972.960.4400

ISSUE	DATE	DESCRIPTION
0	12/15/2017	ISSUED FOR PERMITTING

PROJECT MANAGER	D.VOGT
CIVIL ENGINEER	D.VOGT
CHECKED BY	
DESIGNED	
DRAWN BY	
QA/QC	
PROJECT NUMBER	

STATE OF TEXAS  
DAVID C. VOGT  
PROFESSIONAL ENGINEER  
12/18/17

BLACKHORN ENVIRONMENTAL SVS, LLC  
JIM WELLS COUNTY, TEXAS  
FOR PERMITTING ONLY. NOT FOR  
BIDDING, OR CONSTRUCTION.

LINER DETAILS		SHEET
FILENAME	LINER DETAILS	P-4
SCALE	N.T.S.	

# **PERMIT APPENDIX E**

FINAL CLOSURE  
(SHEET 2-11)

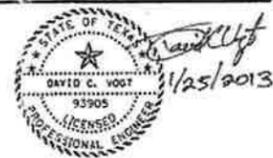
DATE: 1/25/2013  
 TIME: 2:41:47 PM  
 USER: rcox  
 FILE: Sable\_Environmental\_II\_LLC\Sable\_Petroleum\_Drill\_Permit\3.00\_CAD\Sheet\_Files\PERMIT\_SHEETS



HDR ENGINEERING, INC.  
 17111 Preston Road  
 Suite 200  
 Dallas, Texas 75248  
 Texas P.E. Firm  
 Firm Registration No. F-754

ISSUE	DATE	DESCRIPTION

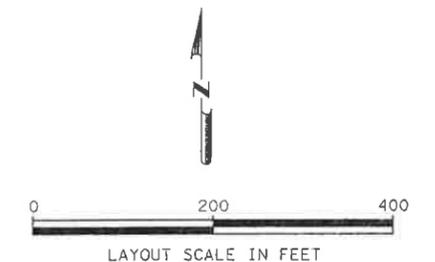
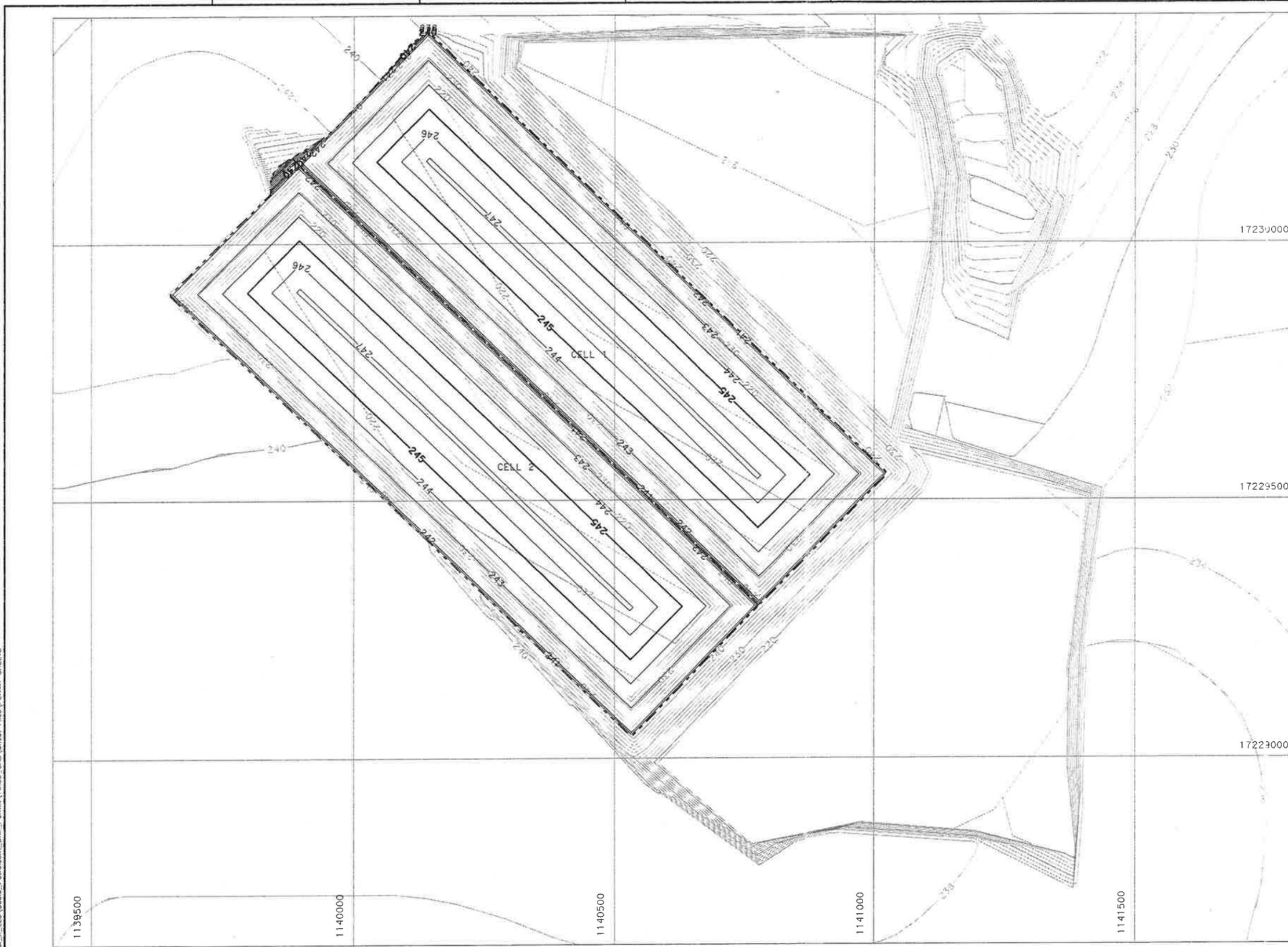
PROJECT MANAGER	D.YOGT
CIVIL ENGINEER	
CHECKED BY	
DESIGNED	B.COX
DRAWN BY	B.COX
QA/QC	
PROJECT NUMBER	



SABLE ENVIRONMENTAL II, LLC  
 JIM WELLS COUNTY, TEXAS  
 FOR PERMITTING ONLY.  
 NOT FOR BIDDING OR CONSTRUCTION

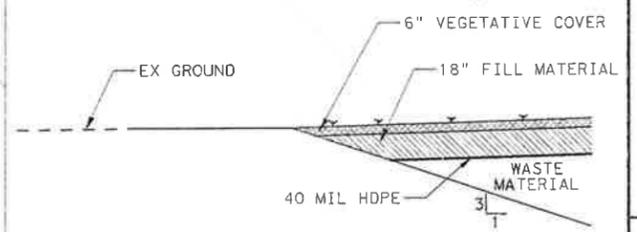
**FINAL CLOSURE**

FILENAME	SE_FC01.dgn	SHEET
SCALE		2-11



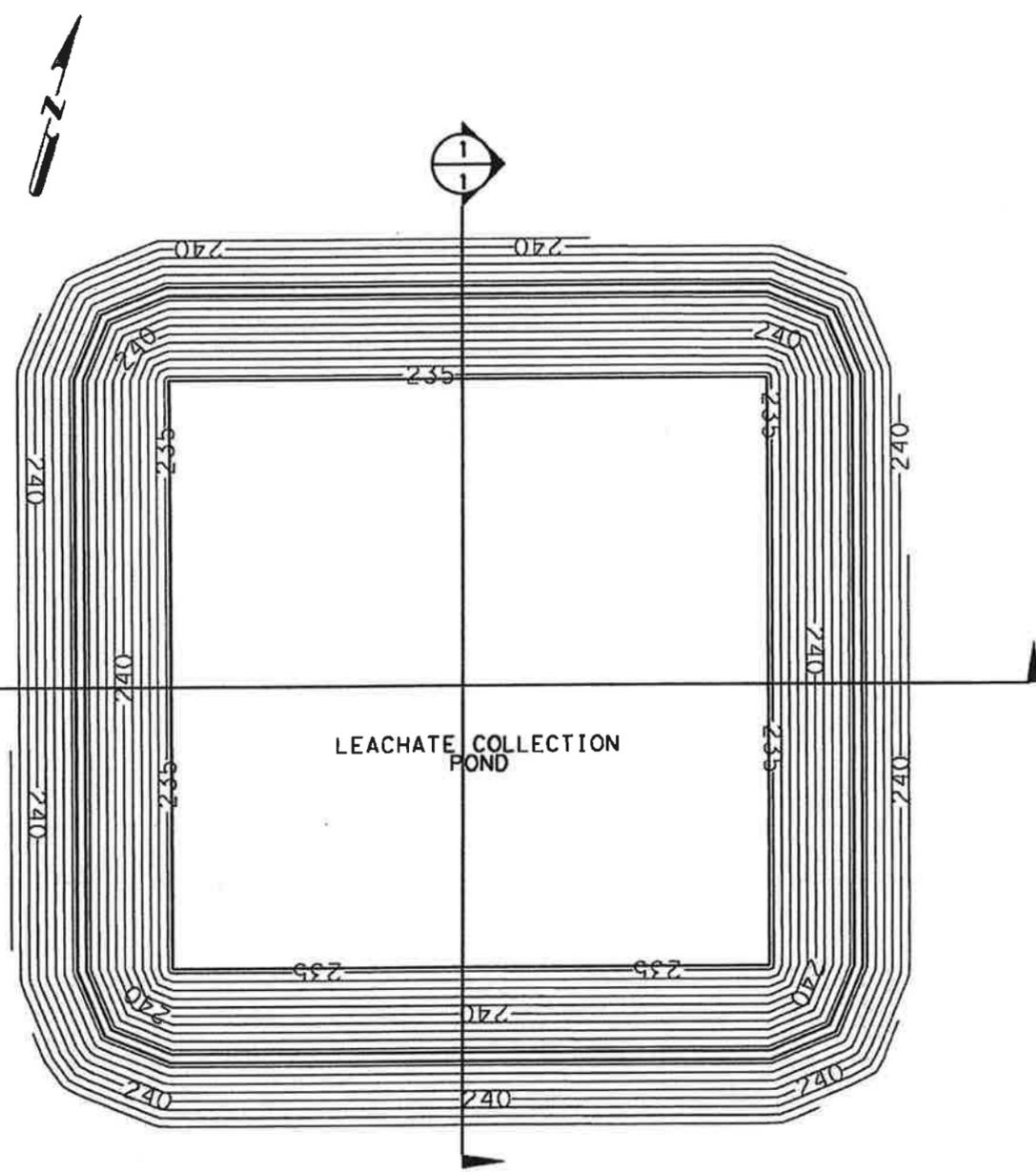
**LEGEND**

- EXISTING CONTOURS
- 230 — PROPOSED CONTOURS
- - - PROPOSED BREAKLINES
- - - PROPOSED LIMITS OF GRADING



# **PERMIT APPENDIX F**

LEACHATE COLLECTION POND  
(SHEET P-5)



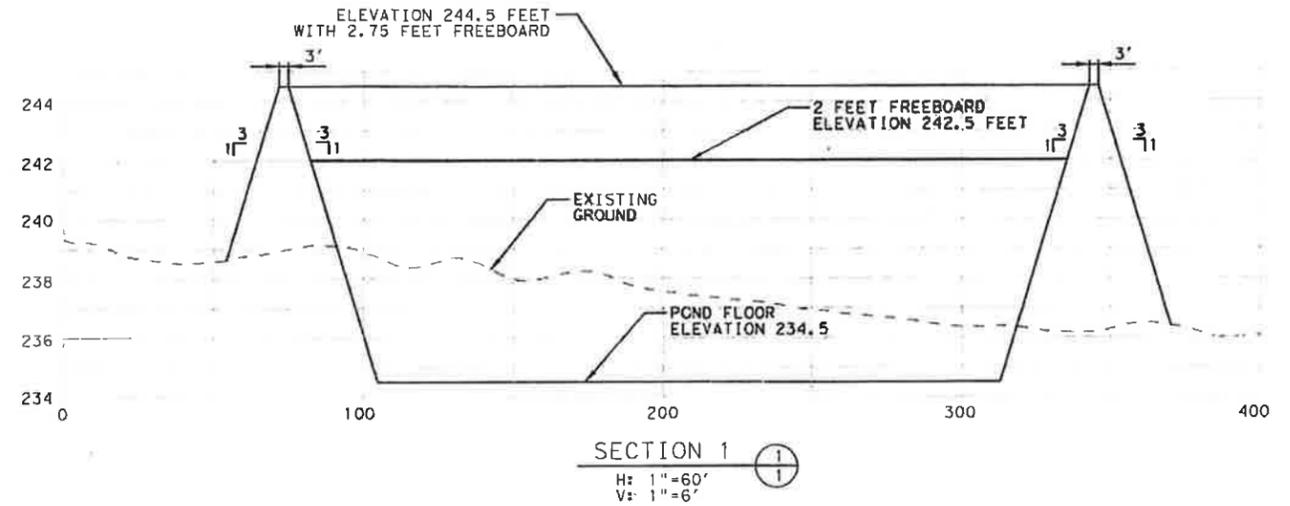
LEACHATE COLLECTION POND

DETAIL  
SCALE: 1"=60'

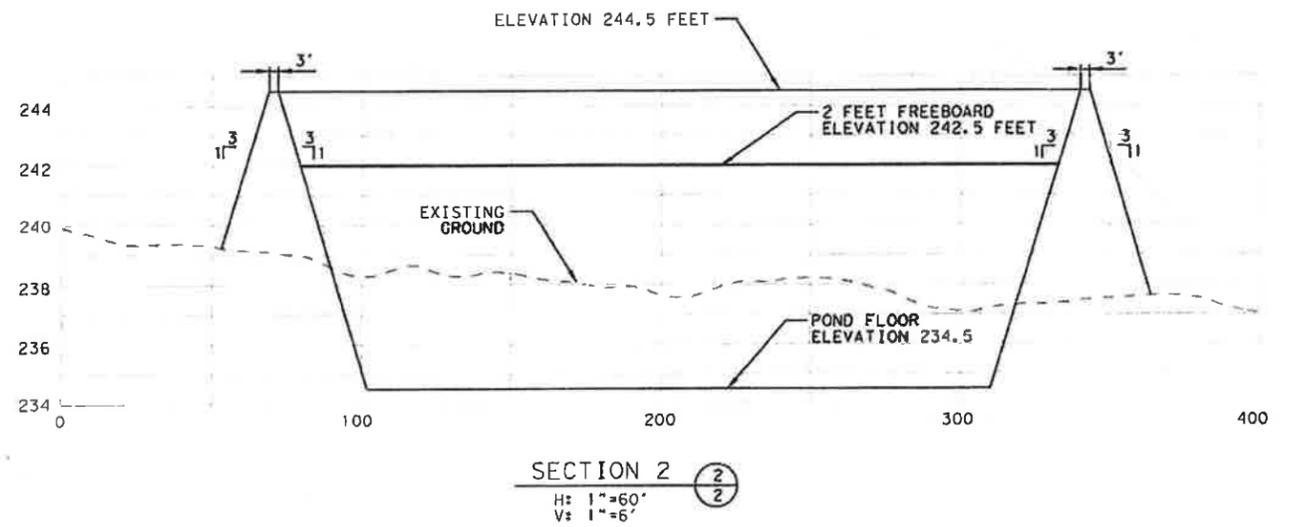
LEGEND

- EXISTING CONTOURS
- 230 — PROPOSED CONTOURS

RECEIVED  
 RRC OF TEXAS  
 APR 17 2018  
 C. S. C.  
 AUSTIN, TX



SECTION 1  
H: 1"=60'  
V: 1"=6'



SECTION 2  
H: 1"=60'  
V: 1"=6'

DATE: 3/29/2018  
 TIME: 10:43:22 AM  
 USER: DVOGT  
 FILE:



HDR  
 Firm Registration No. F-754  
 17111 Preston Road, Suite 300  
 Dallas, Texas 75248-1229  
 972.960.4400

ISSUE	DATE	DESCRIPTION
0	12/15/2017	ISSUED FOR PERMITTING

PROJECT MANAGER	D.VOGT
CIVIL ENGINEER	
CHECKED BY	
DESIGNED BY	J.PARAS
DRAWN BY	J.PARAS
QA/QC	
PROJECT NUMBER	



*[Signature]*  
 3/29/18

BLACKHORN ENVIRONMENTAL SVS, LLC  
 JIM WELLS COUNTY, TEXAS

FOR PERMITTING ONLY. NOT FOR  
 BIDDING, OR CONSTRUCTION.

LEACHATE COLLECTION POND

FILENAME	Leachate Collection Pond	SHEET
SCALE		P-5

# **PERMIT APPENDIX G**

**STRUCTURAL SEPARATION AREA PLAN  
(SHEET S-4)**

**MPS MISCELLANEOUS DETAILS  
(SHEET C-19)**





# **PERMIT APPENDIX H**

**WORKING AREA AND SEPARATION AREA  
(SHEET SE\_DPa218.dgn)**

PLTDRIVER: TXDOT\_WIN\_LASER.plt  
 PENTABLE: Blackhorn.tbl  
 USER: DVOGT  
 FILE:

DATE: 2/14/2018  
 TIME: 2:45:56 PM  
 USER: DVOGT  
 FILE:



**HDR**  
 Firm Registration No. F-754  
 17111 Preston Road, Suite 300  
 Dallas, Texas 75248-1229  
 972.960.4400

ISSUE	DATE	DESCRIPTION
0	12/15/2017	ISSUED FOR PERMITTING

PROJECT MANAGER	D.VOGT
CIVIL ENGINEER	
CHECKED BY	
DESIGNED BY	B.COX
DRAWN BY	B.COX
QA/QC	
PROJECT NUMBER	



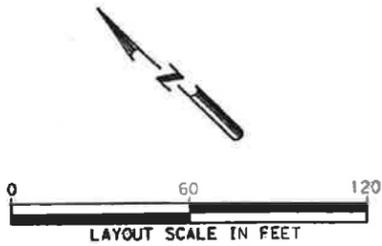
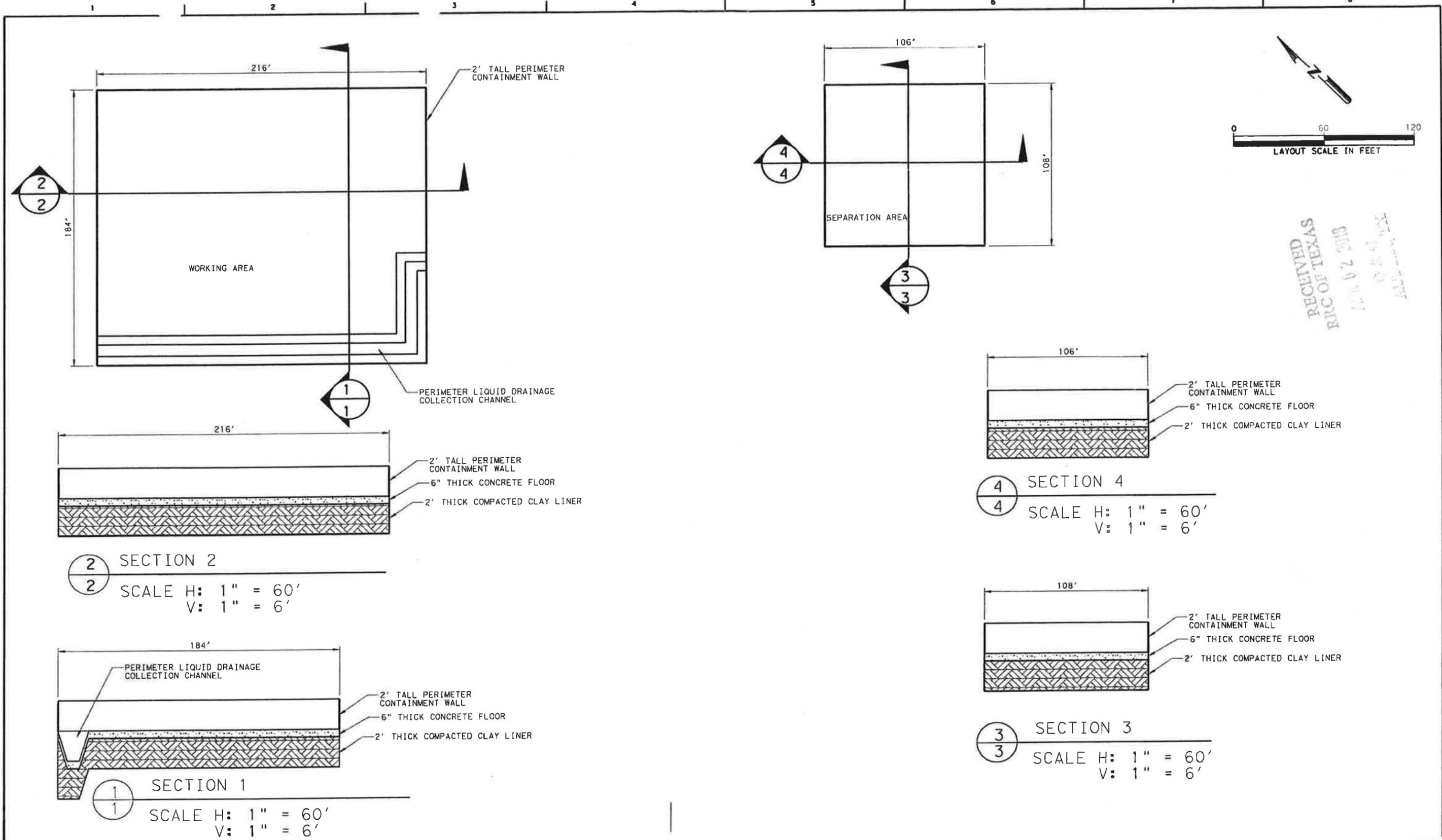
*[Signature]*  
 2-14-18

**BLACKHORN ENVIRONMENTAL SVS, LLC**  
 JIM WELLS COUNTY, TEXAS

FOR PERMITTING ONLY. NOT FOR  
 BIDDING, OR CONSTRUCTION.

**WORKING AREA AND SEPARATION AREA**

FILENAME	BLACKHORN DRYING PAD	SHEET
SCALE		SE_DPa218.dgn



RECEIVED  
 EIRC OF TEXAS  
 FEB 02 2018  
 0 8 0 PM  
 11111 PRESTON RD

**SECTION 2**  
 SCALE H: 1" = 60'  
 V: 1" = 6'

**SECTION 1**  
 SCALE H: 1" = 60'  
 V: 1" = 6'

**SECTION 4**  
 SCALE H: 1" = 60'  
 V: 1" = 6'

**SECTION 3**  
 SCALE H: 1" = 60'  
 V: 1" = 6'