OKR2013820
SUNOCO, INC. - TULSA REFINERY
ARKANSAS RIVER
BANK STABILIZATION/CLOSURE OF SWMU 6
ENCLOSURE 4 OF 5

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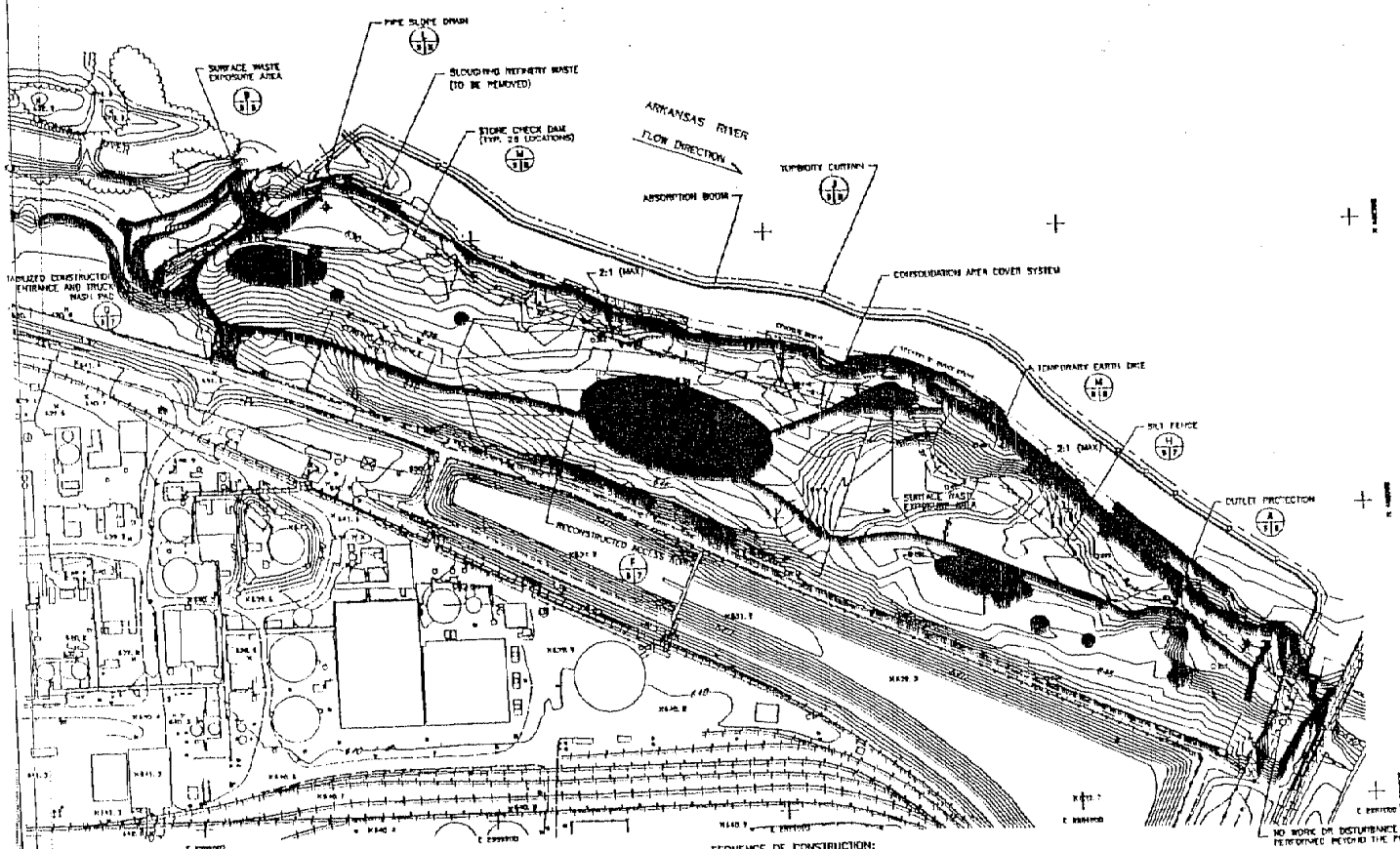


LEGEND:

- EXISTING 1-FOOT CONTOUR
- EXISTING 5-FOOT CONTOUR
- PROPOSED 2-FOOT FINAL CONTOUR
- PROPOSED 10-FOOT FINAL CONTOUR
- LIMITS OF DISTURBANCE
- APPROXIMATE SWMU-6 BOUNDARY
- APPROXIMATE PROPERTY LINE
- SILT FENCE
- PIPE SLOPE DRAIN
- TEMPORARY EARTH DIKE
- TURBIDITY CURTAIN
- ABSORPTION BOOM
- FENCE
- GUARD RAIL
- STONE CHECK DAM
- ELECTRIC POLE
- TREE
- MW-4 MONITORING WELL
- 641.4 SPOT ELEVATION
- TREE LINE
- SURFACE WASTE EXPOSURE
- SLOUGHING REFINERY WASTE
- CONCRETE DEBRIS
- ACCESS ROAD

NOTES:

1. SEE DRAWING NO. 1 FOR GENERAL NOTES AND LEGEND.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT NO SEDIMENT DISCHARGES FROM THE WORK AREA. SUPPLEMENTAL EROSION AND SEDIMENT CONTROLS MAY BE REQUIRED BY CONTRACTOR TO MEET THIS REQUIREMENT, AND SHALL BE IMPLEMENTED AS DIRECTED BY THE ENGINEER. CONTRACTOR SHALL MAINTAIN THESE CONTROLS.
3. SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES ON SITE, AND SHALL BE MAINTAINED UNTIL PERMANENT GROUND STABILIZATION IS ESTABLISHED, AS APPROVED BY ENGINEER.
4. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. ADJUSTMENTS SHALL BE MADE AS CONSTRUCTION PROGRESSES IN ORDER TO MAINTAIN A FUNCTIONING EROSION AND SEDIMENT CONTROL SYSTEM. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION, AND AS DIRECTED BY THE ENGINEER.
5. EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND AT LEAST DAILY DURING CONSTRUCTION.
6. EROSION CONTROL DEVICES SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A FUNCTIONING EROSION CONTROL SYSTEM.
7. EROSION CONTROL DEVICES SHALL BE CLEANED WHEN THEY BECOME ONE-HALF FILLED WITH SEDIMENT AND SHALL BE REMOVED ONLY AFTER PERMANENT GROUND COVER/VEGETATION HAS BEEN ESTABLISHED.
8. THE SITE SHALL BE SEEDED OR SODDED TO ESTABLISH PERMANENT VEGETATION ON ALL EXPOSED AREAS AS SOON AS PRACTICAL AFTER FINAL GRADING. TEMPORARY SEEDING OR MULCH SHALL BE USED AS NECESSARY FOR PROTECTION UNTIL PERMANENT SEEDING IS ESTABLISHED.
9. EROSION CONTROLS MAY BE INSTALLED IN PHASES OR SEGMENTS SUCH THAT THE CONTROLS ARE EFFECTIVE FOR ALL WORK PERFORMED IN THE CORRESPONDING AREA. THE CONTROLS SHALL REMAIN IN PLACE UNTIL THE AREA IS COMPLETELY STABILIZED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION IN THE RELOCATION OF THE BOOM AND TURBIDITY CURTAIN.
10. THE EARTH DIKE IS REQUIRED TO DIVERT SURFACE WATER RUNOFF AWAY FROM THE RIVERBANK TO MINIMIZE THE QUANTITY OF WATER FLOWING OVER THE BANK DURING REGRADING ACTIVITIES. THE DIKE, CHECKDAMS, AND PIPE SLOPE DRAINS SHALL REMAIN IN PLACE UNTIL THE BANK IS FULLY STABILIZED; I.E. RIPRAP, EROSION MAT, AND/OR VEGETATIVE COVER.
11. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT COVER/VEGETATION IS ESTABLISHED AND THEN REMOVED SO THAT DRAINAGE FROM THE SITE IS NOT IMPEDED.
12. CONTRACTOR SHALL PROVIDE ON-CALL SERVICE 24 HOURS A DAY, 7 DAYS A WEEK, TO MAINTAIN AND REPAIR THE TURBIDITY CURTAIN, BOOM, AND OTHER ONSITE EROSION AND SEDIMENT CONTROLS.
13. CONTRACTOR SHALL SOAK AND CONTAIN ANY EXCESS HYDROCARBON SUSPENDED BEYOND THE CONTAINMENT BOOM. CONTAINERS SHALL BE PLACED IN DRUM STORAGE AREA.

SEQUENCE OF CONSTRUCTION:

THE FEATURES SHOWN ON THESE DRAWINGS SHALL BE CONSTRUCTED ACCORDING TO THE SEQUENCE PRESENTED BELOW, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

I. STABILIZED CONSTRUCTION ENTRANCE
1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND TRUCK WASH PAD.
2. CONSTRUCT CONTRACTOR STAGING AND STORAGE AREA.
3. CONSTRUCT DECONTAMINATION PAD.

II. RIVERBED
1. INSTALL TURBIDITY CURTAIN
2. INSTALL SILT FENCE
3. CLEAN AND GRUB VEGETATION ONLY AS REQUIRED TO PERFORM PROJECT WORK.
4. STRIP CLEAN TOPSOIL FROM DESIGNATED CONSOLIDATION AREA AND STOCKPILE FOR FUTURE RE-USE.
5. PREPARE CONSOLIDATION AREA, AND CONTAINING AREA, AS NECESSARY.
6. EXCAVATE SLOUGHING REFINERY WASTE FROM RIVERBED, AS REQUIRED. CONDITION, AS NECESSARY, AND PLACE, GRADE, AND COMPACT MATERIALS IN THE CONSOLIDATION AREA.

III. RIVERBANK
1. INSTALL THE TEMPORARY EARTH DIKE, CHECK DAMS, AND PIPE SLOPE CONVEYANCE STRUCTURES.
2. EXCAVATE SLOUGHING REFINERY WASTE FROM TOE OF THE RIVERBANK, AS REQUIRED. CONDITION, AS NECESSARY, AND PLACE, GRADE, AND COMPACT MATERIALS IN THE CONSOLIDATION AREA. REMOVE CONCRETE DEBRIS FROM THE RIVERBANK AND REUSE PER THESE DOCUMENTS.
3. BACKFILL RIVERBANK TOE EXCAVATION WITH CLAY.
4. REGRADE RIVERBANK SIDESLOPE. EXCAVATED MATERIALS SHALL BE CONDITIONED, AS NECESSARY, AND PLACED IN THE CONSOLIDATION AREA.
5. INSTALL CLAY, RIPRAP, TOPSOIL, AND EROSION MAT COVER SYSTEM OVER REGRADED RIVERBANK.
6. ALL DISTURBED SOIL AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.

IV. SURFACE WASTE EXPOSURE AREAS
1. EXCAVATE EXPOSED SURFACE WASTE, AS REQUIRED, CONDITION, AS NECESSARY, AND PLACE, GRADE, AND COMPACT MATERIALS IN THE CONSOLIDATION AREA.
2. INSTALL EXPOSED SURFACE WASTE COVER SYSTEM.
3. ALL DISTURBED SOIL AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.

V. SITE "A"
1. BACKFILL AND GRADE SITE "A".
2. PLACE TOPSOIL.
3. ALL DISTURBED SOIL AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.

VI. CONSOLIDATION AREA
1. INSTALL THE CONSOLIDATION AREA COVER SYSTEM.
2. REPLACE AND REPAIR THE GRAVEL ACCESS ROAD, ACCORDINGLY.
3. PLACE TOPSOIL FROM RIVERBANK CREST TO ELEVATION 639 FEET.
4. ALL DISTURBED SOIL AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
5. PLANT TREES IN DESIGNATED AREA.

VII. REMOVAL OF SEDIMENT CONTROLS
1. AFTER GRADING OPERATIONS WITHIN THE LIMITS OF DISTURBANCE, OR SPECIFIC PHASE/DRAINAGE AREA OF WORK, ARE COMPLETED AND ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED, EROSION CONTROLS, SUCH AS PIPE SLOPE DRAINS, EARTH DIKE, CHECK DAMS, SILT FENCE, TURBIDITY CURTAIN AND SOC, SHALL BE REMOVED, AS APPROVED BY THE ENGINEER.

| NO. | DATE | REVISION DESCRIPTION | BY | CKD |
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CLOSURE OF SWMU-6
SUNOCO REFINERY
TULSA, OKLAHOMA

EROSION AND SEDIMENT CONTROL PLAN

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| PROJECT MANAGER DJ | DEPARTMENT MANAGER AH |
| LEVEL REVISION PRV. RE | CHECKED S. |
| DRAWN JC | DATE 3-5-04 |
| PROJECT NUMBER MD000779.0002 | DRAWING NUMBER 5 |