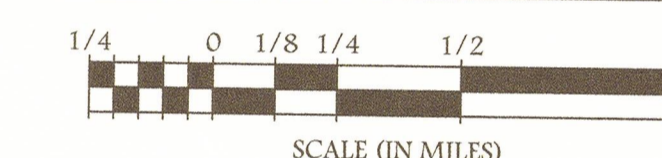
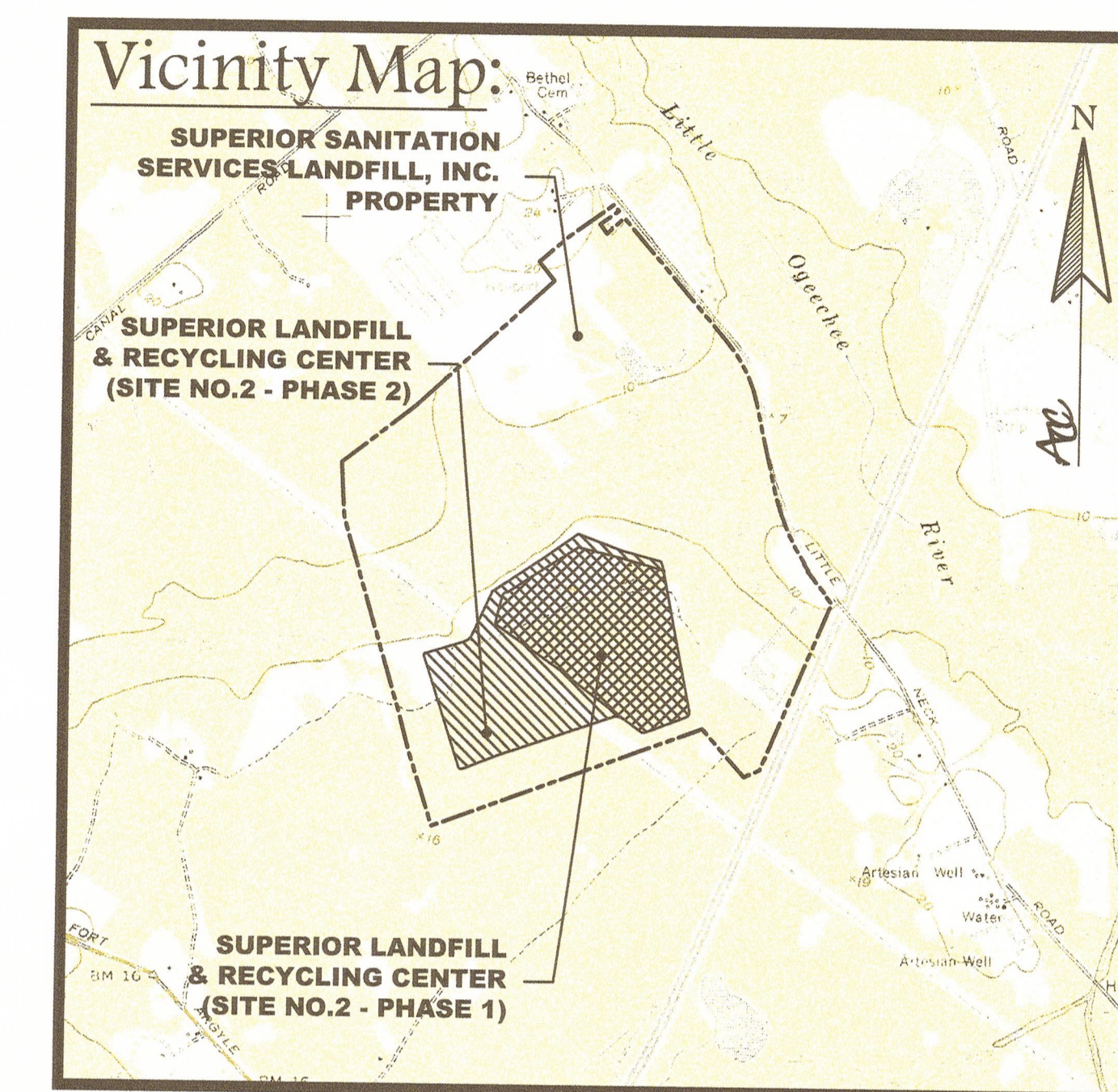


# Superior Landfill & Recycling Center Site No. 2 MSWL Lateral Expansion D&O Plans

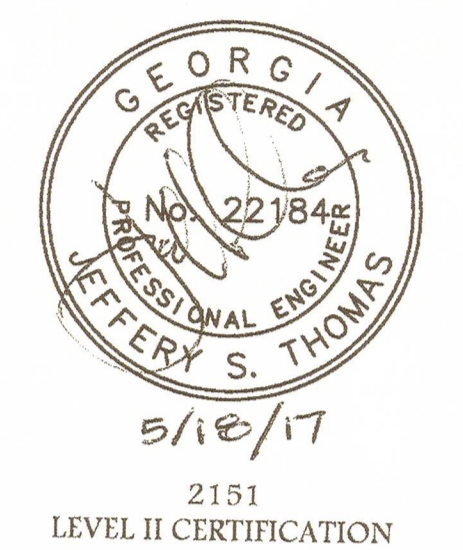
Permit No. 025-070D(MSWL)

CHATHAM COUNTY, GEORGIA

DECEMBER 2009  
(REVISED MARCH 2011)



ATLANTIC COAST  
CONSULTING, INC.  
630 Colonial Park Drive  
Suite 110  
Roswell, GA 30075  
o 770.594.5998  
f 770.594.5967  
www.atlcc.net



2151  
LEVEL II CERTIFICATION

PROJECT:  
SUPERIOR LANDFILL &  
RECYCLING CENTER  
SITE No. 2 MSWL  
EXPANSION  
D&O PLANS  
PERMIT No.: 025-070D(MSWL)



WM of Georgia, Inc.  
3001 Little Neck Road  
Savannah, Ga 31419

**REVISIONS**

0. Initial Issue.	12/09/2009
1. Response to Comments	11/05/2010
2. Response to Comments	03/16/2011
3. Response to EPD Comments	10/12/2015
4. CCR Management	04/05/2017
5. Response to EPD Comments	05/18/2017

**Project Information:**

**Address:**  
3001 Little Neck Road  
Savannah, GA 31419  
912-927-6113

**Description:**  
Expansion of previously  
permitted landfill (Site No. 2,  
Phase 1)

**Owner:**



Waste Management of Georgia, Inc.

**CONTACT: Mr. Zane Ferris**  
Director of Landfill Operations  
(912) 927-6113

**Index of Drawings:**

Sheet No.	Sheet Title
1 of 36	Cover
2 of 36	Existing Conditions and Site Master Plan
3 of 36	Base Grades & Leachate Collection Plan
4 of 36	Final Grading Plan
5 of 36	Cells 4A-5A Development Plan
6 of 36	Cells 1A, 2A, and 3A Development Plan
7 of 36	Cell 9 Development Plan
8 of 36	Cell 10 Development Plan
8A of 36	Cell 10A Development Plan
9 of 36	Cell 11 Development Plan
10 of 36	Cell 12 Development Plan
11 of 36	Cell 13 Development Plan
12 of 36	Cell 14 Development Plan
13 of 36	Cell 15 Development Plan
14 of 36	Erosion & Sedimentation Control Plan
15A of 36	Environmental Monitoring Plan
15B of 36	Environmental Monitoring Plan Final Stage
16 of 36	Landfill Cross-Sections
17 of 36	Landfill Cross-Sections
18 of 36	Landfill Cross-Sections
19 of 36	Landfill Cross-Sections
20 of 36	Landfill Cross-Sections
21 of 36	Landfill Cross-Sections
22 of 36	Landfill Operational Procedures
22A of 36	Landfill Operational Procedures
23 of 36	Closure/Post-Closure Care Plan
24A of 36	Methane Gas Monitoring Plan
24B of 36	Methane Gas Monitoring Plan
25A of 36	Groundwater Monitoring Plan
25B of 36	Groundwater Monitoring Plan
25C of 36	Groundwater Monitoring Plan
25D of 36	Groundwater Monitoring Plan
26A of 36	Construction Quality Assurance Plan
26B of 36	Construction Quality Assurance Plan
26C of 36	Construction Quality Assurance Plan
26D of 36	Construction Quality Assurance Plan
27 of 36	Base Liner & Leachate Collection Details
28 of 36	Base Liner & Leachate Collection Details
29 of 36	Base Liner & Leachate Collection Details
30 of 36	Final Cover Details
31 of 36	Final Cover Details
32 of 36	Erosion & Sedimentation Control Details
33 of 36	Erosion & Sedimentation Control Details
34 of 36	Erosion & Sedimentation Control Details
35 of 36	Miscellaneous Details
36 of 36	Solidification Pit Details

GEORGIA  
Environmental Protection Division  
Solid Waste Management Program  
MINOR MODIFICATION APPROVAL  
SOLID WASTE PERMIT NO. 025-070D(MSWL)  
APPROVED BY: [Signature] DATE: 05/24/2017

Drawn by: JST Checked by: [Signature]

**PROJECT NUMBER:**

IO10-215  
February 2014

COVER

SHEET 1 OF 36



- L. GROUNDWATER, SURFACE WATER, AND METHANE MONITORING SYSTEMS SHALL BE INSTALLED AT THE SITE. SAMPLING PARAMETERS, SAMPLING SCHEDULES, MONITORING WELL CONSTRUCTION AND SPACING MUST ADHERE TO THE GUIDELINES ESTABLISHED IN EPD'S RULE OF SOLID WASTE MANAGEMENT, CHAPTER 391-3-4. THE SYSTEM DESIGN AND MONITORING REQUIREMENTS SHALL BE DETAILED IN A GROUNDWATER MONITORING PLAN THAT IS PREPARED IN ACCORDANCE WITH THE GEORGIA MANUAL FOR GROUNDWATER MONITORING AND IS APPROVABLE BY EPE.
- M. THE SUB-BASE SHALL MEET THE FOLLOWING PERFORMANCE STANDARDS:
- BEAR THE WEIGHT OF THE LINER SYSTEM, WASTE, WASTE COVER MATERIAL, AND EQUIPMENT OPERATING ON THE FACILITY WITHOUT CAUSING OR ALLOWING A FAILURE OF THE LINER SYSTEM.
  - ACCOMMODATE POTENTIAL SETTLEMENT WITHOUT DAMAGE TO THE LINER SYSTEM.

31. **CERTIFICATION:** PRIOR TO RECEIPT OF SOLID WASTE OR CCR, THE DIVISION MUST BE PROVIDED WITH WRITTEN CERTIFICATION BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN GEORGIA, THAT THE FACILITY HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PERMIT. UNLESS NOTIFIED OTHERWISE BY THE DIVISION, WITHIN 15 DAYS OF RECEIPT BY THE DIVISION OF THE WRITTEN CERTIFICATION, THE FACILITY OWNER OR OPERATOR MAY COMMENCE DISPOSAL OF SOLID WASTE. THIS PROCESS SHALL BE REPEATED FOR EACH SUBSEQUENT MAJOR CONSTRUCTION STAGE, INCLUDING BUT NOT LIMITED TO, NEW CELLS OR TRENCHES, MONITORING WELLS, SEDIMENT PONDS, LEACHATE TREATMENT SYSTEMS, MODIFICATIONS ADDING A NEW SOLID WASTE HANDLING PROCESS, AND APPLICATION OF FINAL COVER.
32. **INITIAL PLACEMENT OF WASTE:** THE FIRST EIGHT FEET OF SOLID WASTE PLACED ON THE PROTECTIVE COVER MAY NOT CONTAIN MATERIAL CAPABLE OF PENETRATING OR PUNCTURING THE PROTECTIVE COVER. THESE MATERIALS WILL BE PULLED ASIDE AND DISPOSED OF IN OTHER AREAS UNTIL THE WASTE LAYER EXCEEDS 8 FEET OVER THE PROTECTIVE COVER.
33. **ENVIRONMENTAL PROTECTION:** THE LANDFILL SHALL BE OPERATED IN SUCH MANNER AS TO PREVENT AIR, LAND, OR WATER POLLUTION, AND PUBLIC HEALTH HAZARDS.
34. **SITE ACCESS:** ENTRANCES TO THE FACILITY ARE EQUIPPED WITH FENCES AND LOCKING GATES TO PREVENT UNAUTHORIZED ACCESS. ACCESS TO THE FACILITY SHALL BE LIMITED TO AUTHORIZED ENTRANCES WHICH SHALL BE CLOSED WHEN THE FACILITY IS NOT IN OPERATION. ALL VEHICULAR ACCESS TO THE FACILITY IS RESTRICTED BY LOCKING GATES WHICH ARE CLOSED AFTER BUSINESS HOURS.
35. **SOLIDIFICATION:** THE SOLIDIFICATION PROCESS IS SHOWN ON SHEET 36.
36. **LANDFILL GAS CONTROL:** THIS LANDFILL IS SUBJECT TO NEW SOURCE PERFORMANCE STANDARDS (NSPS) AS PART OF THE CLEAN AIR ACT AND MAY BE REQUIRED TO INSTALL A LANDFILL GAS COLLECTION AND CONTROL SYSTEM (GCCS) WHEN NMOC EMISSIONS EXCEED REGULATORY REQUIREMENTS. A GCCS HAS BEEN DESIGNED AND PARTIALLY CONSTRUCTED FOR THE CURRENTLY PERMITTED SITE 2, PHASE 1. A MODIFIED GCCS DESIGN AND OPERATIONAL PLAN INCORPORATING SITE 2, PHASE 2 WILL BE SUBMITTED TO GEORGIA EPD ONCE AN EXCEEDANCE HAS OCCURRED.
37. **STAGED CONSTRUCTION & FILL SEQUENCE:** THE LANDFILL WILL BE CONSTRUCTED IN STAGES. EACH STAGE MAY BE SUBDIVIDED INTO CELLS FOR CONSTRUCTION. CELL SIZE MAY VARY DEPENDING ON OPERATING CONDITIONS AND WASTE STREAM VOLUME. TEMPORARY STORMWATER CONTROLS, TEMPORARY ROADS AND TEMPORARY LEACHATE CONTROLS SHALL BE CONSTRUCTED FOR EACH CELL. CONSTRUCTION GRADES SHALL MAINTAIN THE MINIMUM PERMITTED SLOPES FOR DRAINAGE IN ACCORDANCE WITH THE STAGE DESIGN. IF VARIATIONS TO THE APPROVED PLAN ARE DESIRED, MINOR MODIFICATIONS WILL BE SUBMITTED TO EPD FOR APPROVAL PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY.

THE ANTICIPATED ORDER IN WHICH STAGES WILL BE CONSTRUCTED AND FILLED IS AS FOLLOWS: STAGE 1, 2, 3, 4, 5, 6A, 7N, 8N, 6S, 7S, 8S, 10A, 9A, 10B, 9B, 5A, 4A, 3A, 2A, 1A, 11, 12, 13, 14, 15. THE INITIAL LIFT IN EACH STAGE WILL START FROM THE LOW END AND PROCEED TOWARDS THE HIGH END. ALL SUBSEQUENT LIFTS IN EACH STAGE WILL CONTINUE IN THE OPPOSITE DIRECTION FROM WHERE THE PRECEDING LIFT ENDS.

38. **CCR MANAGEMENT PLAN RENEWAL, MODIFICATIONS AND LOCAL GOVERNMENT NOTIFICATION:**

UPON APPROVAL OF THE CCR MANAGEMENT PLAN BY THE EPD, THE CCR MANAGEMENT PLAN SHALL BE VALID FOR A DURATION OF ONE YEAR. THE FACILITY WILL SUBMIT AN ANNUAL CCR MANAGEMENT AND DUST CONTROL REVIEW SEALED BY A GEORGIA REGISTERED PROFESSIONAL ENGINEER. THE ANNUAL CCR MANAGEMENT REPORT MAY BE COMBINED WITH THE ANNUAL FUGITIVE DUST CONTROL REPORT DEFINED IN SECTION 19 OF THIS PLAN.

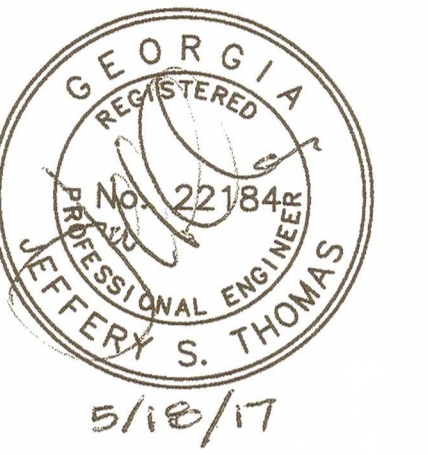
THIS PLAN WILL BE REVISED AND SUBMITTED TO EPD FOR APPROVAL IF CHANGES IN THE OPERATIONAL PROCEDURES OR FACILITY DESIGN ARE REQUIRED DUE TO CHANGES IN THE CCR WASTE STREAM.

THE OWNER OR OPERATOR WILL PROVIDE WRITTEN NOTIFICATION INFORMING CHATHAM COUNTY THAT THE FACILITY IS PLANNING TO ACCEPT CCR WASTE. ADDITIONALLY, CHATHAM COUNTY WILL BE PROVIDED WITH WRITTEN NOTIFICATION FROM THE OWNER OR OPERATOR IF THE CCR MANAGEMENT PLAN IS AMENDED AND APPROVED BY EPD.

4



ATLANTIC COAST  
CONSULTING, INC.  
630 Colonial Park Drive  
Suite 110  
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o 770.594.5998  
f 770.594.5967  
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5/16/17  
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SUPERIOR LANDFILL &  
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3. Minor Modification	10/12/2015
4. CCR Management	04/03/2017
5. Responses to EPD Comments	05/18/2017

Drawn by: JST  
Checked by: [Signature]

PROJECT NUMBER:

1010-215

February 2014

GEORGIA  
Environmental Protection Division  
Solid Waste Management Program  
MINOR MODIFICATION APPROVAL  
SOLID WASTE PERMIT NO. 025-070D(MSWL)  
APPROVED BY: [Signature] DATE: 05/23/2017

LANDFILL  
OPERATIONAL  
PROCEDURES  
(CONTINUED)

CLOSURE PLAN

THE CLOSURE PLAN DESCRIBES THE STEPS NECESSARY TO CLOSE THE DISPOSAL FACILITY AT ANY POINT DURING ITS INTENDED OPERATING LIFE, IN A MANNER THAT MINIMIZES THE NEED FOR FURTHER MAINTENANCE AND MINIMIZES THE POST-CLOSURE RELEASE OF LEACHATE TO THE GROUND OR SURFACE WATERS, OR OTHER POLLUTANTS TO THE EXTENT NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT. THE FOLLOWING ITEMS WILL BE ACCOMPLISHED AT ANY TIME THAT THE DIRECTOR OF THE GEORGIA EPD DETERMINES THAT THE SITE WILL BE CLOSED:

- 1. WRITTEN NOTICE OF FINAL CLOSURE SHALL BE PROVIDED TO THE DIRECTOR OF THE GEORGIA EPD WITHIN THIRTY (30) DAYS OF RECEIVING THE FINAL LOAD OF WASTE...
2. FINAL COVER/GRADING: A UNIFORM COMPACTED LAYER OF CLEAN EARTH COVER...
3. VEGETATION METHODS: AFTER APPLICATION OF FINAL COVER, THE SITE WILL BE GRASSED IN ACCORDANCE WITH THE VEGETATIVE PLAN...
4. THE DEED FOR THE PROPERTY WHICH WAS USED FOR LANDFILLING SHALL INCLUDE NOTICE OF THE LANDFILL OPERATIONS...
5. EQUIPMENT NEEDED: THE SITE EQUIPMENT DESCRIBED IN THE OPERATIONAL PROCEDURES WILL BE AVAILABLE TO CLOSE THE SITE...
6. EROSION AND SEDIMENTATION CONTROLS: EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED UNTIL A SUITABLE STAND OF GRASS HAS BEEN ESTABLISHED...
7. IF THE LANDFILL IS CLOSED PRIOR TO REACHING APPROVED FINAL ELEVATIONS, AN AS-BUILT PLAN SHALL BE SUBMITTED TO EPD FOR REVIEW WITHIN 30 DAYS OF CLOSING...
8. A PROFESSIONAL ENGINEER REGISTERED TO PRACTICE IN THE STATE OF GEORGIA SHALL PROVIDE A WRITTEN CERTIFICATION THAT THE FACILITY HAS BEEN CLOSED IN ACCORDANCE WITH THE APPROVED CLOSURE PLAN.

CLOSURE COST ESTIMATE

IT IS ASSUMED THAT THE SITE 2 DISPOSAL AREA WILL BE CLOSED USING THE SEQUENCE SHOWN ON THIS DRAWING. THE COST ESTIMATES ARE PROVIDED FOR THE ANTICIPATED WORST CASE SCENARIO. THE FOLLOWING UNIT PRICES WERE OBTAINED FROM RECENT CONTRACTOR BIDS ON SIMILAR PROJECTS. IT IS ALSO ASSUMED THAT THE SITE HAS AN ACTIVE LANDFILL GAS COLLECTION SYSTEM IN ALL AREAS EXCEPT FOR 20 ACRES. A PERMANENT RECORD WILL BE MAINTAINED OF ALL CLOSURE ACTIVITIES.

Table with 3 columns: Item description, Quantity, and Cost. Includes items like Mobilization (\$250,000), Final Cover (\$629,805), Grassing Costs (\$182,175), Down Drains (\$195,040), Gas Extraction System Expansion (\$500,000), Sediment Pond Cleanout (\$13,949), Solidification Pit Removal (\$30,000), Engineering (\$100,000), CQA (\$728,700), and Closure Construction Management (\$7,680,514).

POST-CLOSURE CARE

THE POST-CLOSURE CARE PLAN DESCRIBES THE STEPS THAT WILL BE TAKEN FOR AT LEAST THIRTY YEARS AFTER COMPLETION OF CLOSURE TO ADEQUATELY PROTECT HUMAN HEALTH AND THE ENVIRONMENT. THE FACILITY CONTACT DURING POST-CLOSURE CARE IS:

WASTE MANAGEMENT CLOSED SITE GROUP
1000 PARKWOOD CIRCLE, SUITE 700
ATLANTA, GA 30339
(770) 805-3520

POST-CLOSURE CARE SHALL INCLUDE THE FOLLOWING:

- 1. POST CLOSURE USE: CURRENTLY, THERE ARE NO PLANS FOR DEVELOPMENT OF THE SITE DURING POST-CLOSURE. ANY POST CLOSURE USE OF THE PROPERTY WILL NOT DISTURB THE INTEGRITY OF THE FINAL COVER, LINER(S), OR ANY OTHER COMPONENTS OF THE CONTAINMENT SYSTEM...
2. SURFACE AND GROUNDWATER MONITORING SCHEDULE: THE SAMPLING AND ANALYSIS PROGRAM IDENTIFIED IN THE EPD APPROVED WATER MONITORING PLAN WILL BE MAINTAINED AND OPERATED THROUGHOUT THE POST-CLOSURE CARE PERIOD...
3. METHANE GAS MONITORING: THE SAMPLING AND ANALYSIS PLAN IDENTIFIED IN THE EPD APPROVED METHANE GAS MONITORING PROGRAM WILL BE MAINTAINED AND OPERATED THROUGHOUT THE POST-CLOSURE PERIOD...
4. ROUTINE INSPECTION OF VEGETATIVE/FINAL COVER/DRAINAGE SYSTEMS: THE SITE SHALL BE INSPECTED ON A QUARTERLY BASIS DURING THE POST-CLOSURE CARE PERIOD...
5. SEDIMENT BASIN MAINTENANCE/CLEANOUT: THE SEDIMENT POND SHALL BE INSPECTED QUARTERLY WHILE IT IS IN SERVICE. THE SEDIMENT POND SHALL BE KEPT IN SERVICE AND PROPERLY MAINTAINED UNTIL AN ADEQUATE VEGETATIVE COVER HAS BEEN ESTABLISHED AND EPD APPROVES THE REMOVAL OF THE SEDIMENT POND...

- 6. LIMITED ACCESS: ACCESS TO THE CLOSED SITE WILL BE LIMITED TO ONLY THOSE PERSONS PERFORMING POST-CLOSURE CARE...
7. IF THE OWNER AND/OR OPERATOR OR ANY SUBSEQUENT OWNER OR OPERATOR OF THE LAND UPON WHICH A LANDFILL IS LOCATED WISHES TO REMOVE WASTES AND WASTE RESIDUES OR CONTAMINATED SOILS...
8. THE OWNER AND/OR OPERATOR WILL BE RESPONSIBLE FOR CONDUCTING ALL MONITORING ACTIVITIES...
9. THE OWNER AND/OR OPERATOR WILL BE RESPONSIBLE FOR ALL MOWING ACTIVITIES ON THE SITE...
10. THE OWNER AND/OR OPERATOR WILL BE RESPONSIBLE FOR CONDUCTING ALL RE-SEEDING AND FERTILIZING ACTIVITIES TO MAINTAIN VEGETATION ON THE SITE...

FINANCIAL ASSURANCE

THE OWNER IS RESPONSIBLE FOR PROVIDING A FINANCIAL ASSURANCE MECHANISM FOR THE CLOSURE AND POST-CLOSURE COSTS. THE FINANCIAL ASSURANCE MECHANISM SHALL BE IN EFFECT PRIOR TO INITIAL PLACEMENT OF WASTE.

ANNUAL POST-CLOSURE CARE COST ESTIMATE

Table with 3 columns: Activity, Quantity, and Annual Cost. Includes Leachate Treatment (\$17,126), Environmental Monitoring (\$1,200), Surface Monitoring (\$52,000), Groundwater Monitoring (\$3,500), Methane Gas Monitoring (\$2,400), Routine Inspection/Repairs (\$4,842), Repair Cost for Gas Collection (\$1,600), Inspection Costs (\$2,000), Sediment Pond Cleanout (\$7,185), Mowing (\$33,000), Re-seeding (\$28,875), Inspection of Monitoring Wells (\$300), Repair of Monitoring Wells (\$300), and Post-Closure Management (\$5,000).

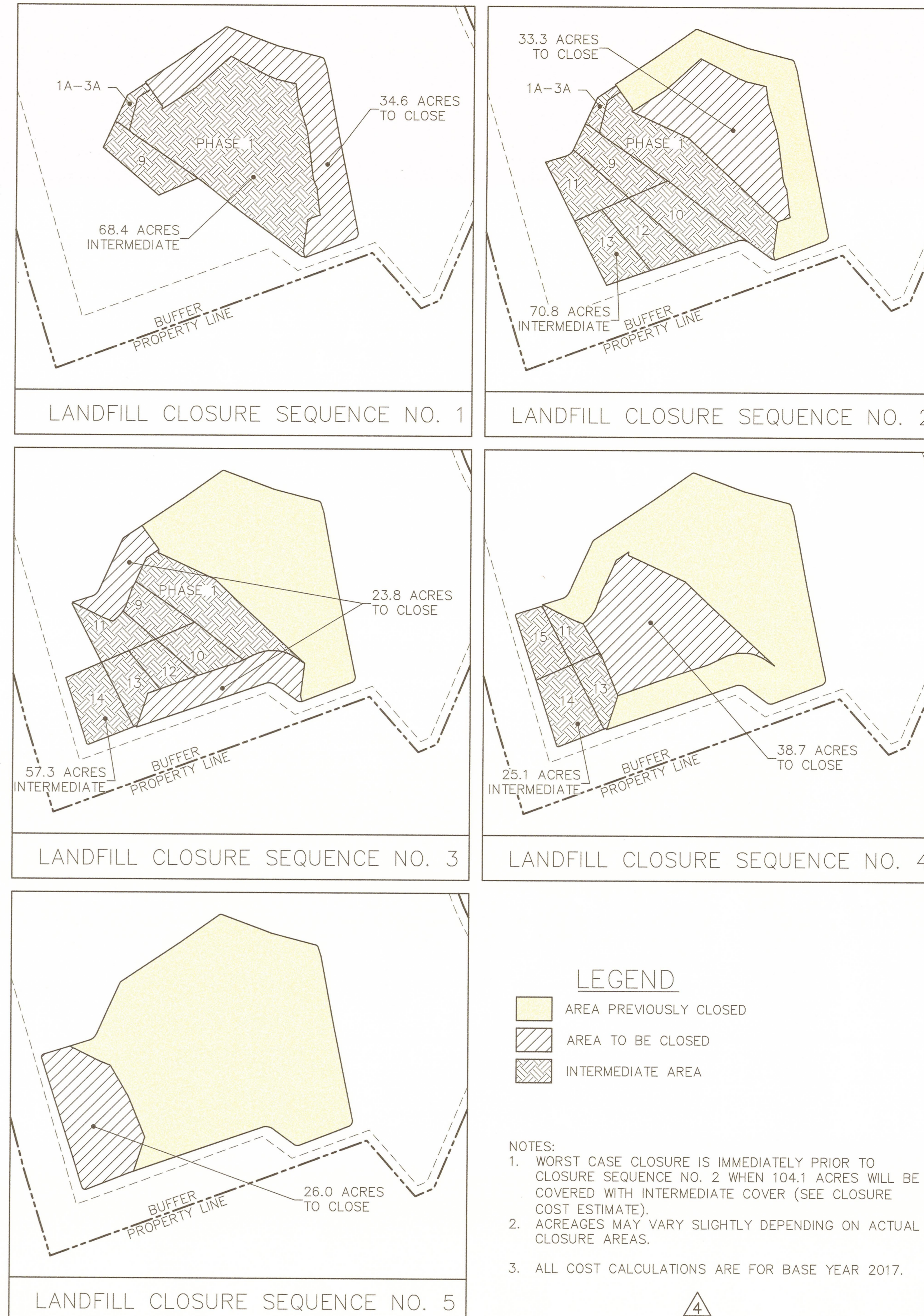
30 YEAR CLOSURE COST & CLOSURE CARE COST ESTIMATE

Summary table showing Total Post-Closure Cost (\$7,029,900), Abandon Wells After 30 Years (\$100,000), Closure Cost (\$7,680,514), Sub-Total 30 Year Cost (\$14,810,414), 5% Contingency (\$740,521), and Total 30 Year Cost (\$15,550,935).

LEGAL DESCRIPTION FOR LIMIT OF FINAL COVER

Beginning at a Property Corner Monument Located at N 737053.9628, E 932406.1795 and proceeding N 34° 27' 7.9" W for a distance of 290.5493 feet to arrive at the POINT OF BEGINNING. From the POINT OF BEGINNING: Said curve turning to the right through an angle of 78° 16' 00.3", having a radius of 65.6447 feet, and whose long chord bears S 22° 02' 36.3" W for a distance of 30.1009 feet to a point on a line. Thence, S 68° 27' 30.6" W for a distance of 200.1478 feet to a point on a line. Thence, S 68° 52' 55.4" W for a distance of 376.2713 feet to the beginning of a non-tangential curve. Said curve turning to the right through an angle of 38° 23' 10.4", having a radius of 71.3696 feet, and whose long chord bears N 87° 14' 34.7" W for a distance of 46.9260 feet to a point of intersection with a non-tangential line. Thence, N 54° 38' 53.6" W for a distance of 40.5761 feet to a point on a line. Thence, N 53° 55' 35.3" W for a distance of 247.5765 feet to the beginning of a non-tangential curve. Said curve turning to the left through an angle of 55° 17' 21.7", having a radius of 144.2875 feet, and whose long chord bears N 75° 52' 25.5" W for a distance of 133.8951 feet to a point of intersection with a non-tangential line. Thence, S 70° 57' 03.8" W for a distance of 1587.1549 feet to the beginning of a curve. Said curve turning to the left through an angle of 02° 35' 40.3", having a radius of 133.5000 feet, and whose long chord bears S 69° 39' 13.6" W for a distance of 6.0449 feet to a point of intersection with a non-tangential line. Thence, S 88° 21' 23.3" W for a distance of 511.9353 feet to the beginning of a non-tangential curve. Said curve turning to the right through an angle of 93° 47' 58.1", having a radius of 37.3224 feet, and whose long chord bears N 64° 15' 03.4" W for a distance of 54.5026 feet to a point of intersection with a non-tangential line. Thence, N 17° 50' 38.6" W for a distance of 1520.6717 feet to the beginning of a non-tangential curve. Said curve turning to the right through an angle of 90° 07' 32.5", having a radius of 37.0945 feet, and whose long chord bears N 27° 13' 58.7" E for a distance of 52.5171 feet to a point of intersection with a non-tangential line. Thence, N 72° 38' 43.6" E for a distance of 536.5043 feet to the beginning of a non-tangential curve. Said curve turning to the left through an angle of 48° 12' 06.8", having a radius of 128.5000 feet, and whose long chord bears N 48° 32' 40.2" E for a distance of 104.9448 feet to a point of intersection with a non-tangential line. Thence, N 24° 26' 36.8" E for a distance of 634.3659 feet to the beginning of a non-tangential curve. Said curve turning to the right through an angle of 31° 41' 10.1", having a radius of 41.5000 feet, and whose long chord bears N 40° 17' 11.9" E for a distance of 22.6593 feet to a point of intersection with a non-tangential line. Thence, N 56° 07' 39.0" E for a distance of 803.2390 feet to a point on a line. Thence, N 54° 39' 02.7" E for a distance of 524.1569 feet to the beginning of a non-tangential curve. Said curve turning to the right through an angle of 56° 31' 23.8", having a radius of 42.1355 feet, and whose long chord bears N 82° 27' 31.0" E for a distance of 39.9022 feet to a point of intersection with a non-tangential line. Thence, S 69° 44' 00.7" E for a distance of 587.8370 feet to the beginning of a curve. Said curve turning to the left through an angle of 05° 37' 20.4", having a radius of 123.0033 feet, and whose long chord bears S 72° 32' 40.9" E for a distance of 12.0652 feet to a point of intersection with a non-tangential line. Thence, S 75° 21' 21.0" E for a distance of 506.8988 feet to the beginning of a non-tangential curve. Said curve turning to the right through an angle of 66° 15' 57.4", having a radius of 42.1131 feet, and whose long chord bears S 42° 39' 15.4" E for a distance of 46.0366 feet to a point of intersection with a non-tangential line. Thence, S 17° 48' 33.2" E for a distance of 99.3217 feet to a point on a line. Thence, S 12° 22' 03.6" E for a distance of 17.8436 feet to a point on a line. Thence, S 10° 36' 45.8" E for a distance of 800.1123 feet to a point on a line. Thence S 11° 35' 06.6" E a distance of 1050.2126 feet to the POINT OF BEGINNING, Containing 156.38 Acres

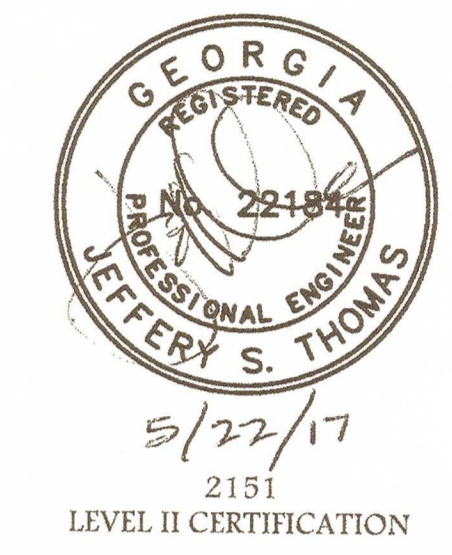
CLOSURE SEQUENCING



LEGEND
AREA PREVIOUSLY CLOSED (Yellow)
AREA TO BE CLOSED (Hatched)
INTERMEDIATE AREA (Cross-hatched)

- NOTES:
1. WORST CASE CLOSURE IS IMMEDIATELY PRIOR TO CLOSURE SEQUENCE NO. 2 WHEN 104.1 ACRES WILL BE COVERED WITH INTERMEDIATE COVER (SEE CLOSURE COST ESTIMATE).
2. ACRES MAY VARY SLIGHTLY DEPENDING ON ACTUAL CLOSURE AREAS.
3. ALL COST CALCULATIONS ARE FOR BASE YEAR 2017.

ACC ATLANTIC COAST CONSULTING, INC.
630 Colonial Park Drive Suite 110
Roswell, GA 30075
o 770.594.5998
f 770.594.5967
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PROJECT: SUPERIOR LANDFILL & RECYCLING CENTER
SITE No. 2 MSWL EXPANSION
D&O PLANS
PERMIT No.: 025-070D(MSWL)



WM of Georgia, Inc.
3001 Little Neck Road
Savannah, Ga 31419

REVISIONS table with columns for revision number, description, and date. Includes Initial Issue, Response to Comments, CCR Management, and Added 5% Contingency.

Drawn by: JST Checked by: [Signature]

PROJECT NUMBER: IO10-215
February 2014

GEORGIA Environmental Protection Division
Solid Waste Management Program
MINOR MODIFICATION APPROVAL
SOLID WASTE PERMIT NO. 025-070D(MSWL)
APPROVED BY: [Signature] DATE: 02/23/2014

CLOSURE/ POST-CLOSURE PLAN

P:\Projects\1010-215-Superior\1010-215-ClosurePlan.dwg 3/22/17 -RH/MAS

**COAL COMBUSTION RESIDUAL GROUNDWATER, SURFACE WATER & UNDERDRAIN MONITORING ANALYTE REQUIREMENTS**

ALL GROUNDWATER, SURFACE WATER & UNDERDRAIN MONITORING POINTS AT THE FACILITY WILL BE SAMPLED SEMI-ANNUALLY FOR THE LIST OF PARAMETERS INCLUDED IN APPENDIX III OF 40 CFR 257 (IN ADDITION TO THE PARAMETERS INCLUDED IN APPENDIX I/II OF THE RULES FOR SOLID WASTE MANAGEMENT AND/OR GEORGIA TABLE 1 AS APPLICABLE. PARAMETERS INCLUDED IN APPENDIX III OF 40 CFR 257 ARE SHOWN IN TABLE 3. APPENDIX III DATA WILL BE EVALUATED IN ACCORDANCE WITH THE STATISTICAL ANALYSIS PLAN. IN THE EVENT OF A VERIFIED SSI FOR AN APPENDIX III SPECIFIC COMPOUND IN A GROUNDWATER MONITORING WELL SAMPLE, THE LIST OF ANALYTES WILL BE EXPANDED TO INCLUDE THOSE LISTED IN APPENDIX IV OF 40 CFR 257.

TABLE 3 40 CFR 257 APPENDIX III ANALYTICAL REQUIREMENTS				
PARAMETER SUITE	CONTAINER TYPE	TEST METHODS*	PRESERVATIVES	HOLD TIME
BORON, CALCIUM	P	6010 OR 6020	HNO <sub>3</sub>	180 DAYS
CHLORIDE, FLUORIDE, SULFATE	P	300	4 C	28 DAYS
pH	NONE	EPA 150.1	NONE	NONE
TOTAL DISSOLVED SOLIDS	P	SM 2540C	4 C	7 DAYS

NOTES:  
P = POLYETHYLENE  
NOTE: ASSESSMENT MONITORING ANALYTES ARE INCLUDED IN APPENDIX IV OF 40 CFR 257. THE NELAP CERTIFIED LABORATORY PERFORMING THE ANALYSIS SHOULD BE CONSULTED REGARDING ANALYTICAL REQUIREMENTS FOR THE APPLICABLE PARAMETER SUITES.

\* ANALYSIS METHODS FROM "TEST METHODS FOR EVALUATING SOLID WASTE, PHYSICAL/CHEMICAL METHODS" SW-846 THIRD ED. USEPA, SEPT. 1986. ANALYTICAL METHODS USED AND REFERENCED FOR MEETING ENVIRONMENTAL TESTING REQUIREMENTS EVOLVE OVER TIME DUE TO CHANGES IN TECHNOLOGY, UPDATES AND ADDITIONS TO PUBLISHED METHODOLOGY, AND WHEN REGULATIONS CHANGE TO REQUIRE REFERENCE TO DIFFERENT METHODS. IN MANY INSTANCES THERE ARE EQUIVALENT METHODS FOR THE SAME ANALYTE PUBLISHED BY DIFFERENT AUTHORITIES ON METHOD DEVELOPMENT; E.G. THE U.S. EPA OFFICE OF WATER, U.S. EPA OFFICE OF SOLID WASTE, STANDARD METHODS, AND ASTM. ANALYTICAL METHODS LISTED IN THE PLAN MAY BE SUBSTITUTED PROVIDED THAT THE ALTERNATE METHODS IS CONSIDERED AN ACCEPTABLE DEVIATION FROM THE PRESCRIBED METHODS IN THE PLAN AND WILL NOT BE CONSIDERED A VIOLATION OF THE REQUIREMENTS OF THE PLAN.

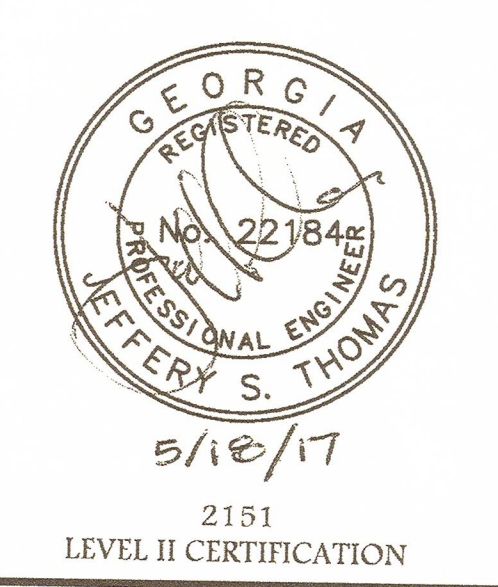
I, EVAN B. PERRY, CERTIFY THAT I AM A QUALIFIED GROUNDWATER SCIENTIST DEMONSTRATED BY A GEORGIA STATE REGISTERED PROFESSIONAL GEOLOGIST CERTIFICATION. I HAVE SUFFICIENT TRAINING AND EXPERIENCE IN GROUNDWATER HYDROLOGY AND RELATED FIELDS TO MAKE SOUND PROFESSIONAL JUDGMENTS REGARDING GROUNDWATER MONITORING AND CONTAMINANT FATE AND TRANSPORT. I FURTHER CERTIFY THAT THE DESIGN OF THE GROUNDWATER MONITORING SYSTEM WAS DESIGNED IN COMPLIANCE WITH THE RULES OF SOLID WASTE MANAGEMENT, CHAPTER 391-3-4, AS SPECIFIED IN [391-3-4-.14(1)(2)(b)].

*Evan B. Perry*  
EVAN B. PERRY  
GEORGIA P.C. REGISTRATION NO. 1744



GEORGIA  
Environmental Protection Division  
Solid Waste Management Program  
MINOR MODIFICATION APPROVAL  
SOLID WASTE PERMIT NO. 025-070D(MSWL)  
APPROVED BY: *[Signature]* DATE: 5/22/17

**ACC**  
ATLANTIC COAST  
CONSULTING, INC.  
630 Colonial Park Drive  
Suite 110  
Roswell, GA 30075  
o 770.594.5998  
f 770.594.5967  
www.atlcc.net



PROJECT:  
**SUPERIOR LANDFILL &  
RECYCLING CENTER  
SITE No. 2 MSWL  
EXPANSION  
D&O PLANS**  
PERMIT No.: 025-070D(MSWL)

**WM**  
WASTE MANAGEMENT  
WM of Georgia, Inc.  
3001 Little Neck Road  
Savannah, Ga 31419

REVISIONS

1. CCR Management	05/18/2017

Drawn by: JST      Checked by: *[Signature]*

PROJECT NUMBER:  
IO10-215  
February 2014

GROUNDWATER  
MONITORING PLAN

PROPERTIES	TEST METHOD	REQUIRED TEST VALUES 40 MIL <sup>(1)</sup>	REQUIRED TEST VALUES 50 MIL STRUCTURED <sup>(1)</sup>	REQUIRED TEST VALUES 60 MIL <sup>(1)</sup>
THICKNESS (MIN.)	ASTM D-5994 OR D-5199	40 mil	50 mil	60 mil
ASPERITY HEIGHT (MIN. AVE.) <sup>(1)</sup>	GM 12	10 mil	10 mil	10 mil
SHEET DENSITY (MIN. AVE.)	ASTM D-792 OR ASTM D-1505	0.940 g/cc	0.940 g/cc	0.940 g/cc
TENSILE PROPERTIES <sup>(2)</sup> (MIN. AVE.)	ASTM D-6693 TYPE IV 5 SPECIMENS IN EACH DIRECTION	84 lb/in 2 IN/MIN 60 lb/in 12% 100%	95 lb/in 75 lb/in 12% 100%	126 lb/in 90 lb/in 12% 100%
TEAR RESISTANCE (MIN. AVE.)	ASTM D-1004 DIE C	28 lbs	35 lbs	42 lbs
PUNCTURE RESISTANCE (MIN. AVE.)	ASTM D-4833	60 lbs	75 lbs	90 lbs
STRESS CRACK RESISTANCE <sup>(3)</sup>	ASTM D-5397 (App.)	300 hours	300 hours	300 hours
CARBON BLACK CONTENT (RANGE)	ASTM D-1603 <sup>(4)</sup>	2-3%	2-3%	2-3%
CARBON BLACK DISPERSION <sup>(5)</sup>	ASTM D-5596	Category 1 or 2	Category 1 or 2	Category 1 or 2
MELT INDEX	ASTM D-1238	0.1 to 1 g/10min	0.1 to 1 g/10 min.	0.1 to 1 g/10 min.
OXIDATIVE INDUCTION TIME (OIT) (MIN. AVE.) <sup>(6)(7)</sup> • STD. OIT, or • HIGH PRESSURE OIT	ASTM D-3895 ASTM D-5885	100 min. 400 min.	100 min. 400 min.	100 min. 400 min.
OVEN AGING AT 85°C <sup>(6)(7)</sup> • STD. OIT (MIN. AVE.), % RETAINED AFTER 90 DAYS OR • HIGH PRESSURE OIT (MIN. AVE.), % RETAINED AFTER 90 DAYS	ASTM D-5721 ASTM D-3895  ASTM D-5885	55% 80%	55% 80%	55% 80%
UV RESISTANCE <sup>(8)</sup> • STD. OIT (MIN. AVE.), OR • HIGH PRESSURE OIT (MIN. AVE.), % RETAINED AFTER 1600 HRS <sup>(9)</sup>	GM 11 ASTM D-3895  ASTM D-5885	NR <sup>(9)</sup> 50%	NR <sup>(9)</sup> 50%	NR <sup>(9)</sup> 50%
LOW TEMPERATURE BRITTLENESS (MAX.)	ASTM D 746	-60°C	-60°C	-60°C
DIMENSIONAL STABILITY	ASTM D 1204 Mod.	±2%, 212°F, 60 minutes	±2%, 212°F, 60 minutes	±2%, 212°F, 60 minutes
NON-DESTRUCTIVE TESTING	GRI GM 6	SEE CQA PLAN TEXT	SEE CQA PLAN TEXT	SEE CQA PLAN TEXT
DRAINAGE STUD THICKNESS	---	---	0.18 in	---
DRAINAGE STUD DISTRIBUTION	---	---	450/ft <sup>2</sup>	---
TRANSMISSIVITY <sup>(13)</sup>	ASTM D-4716	---	1 x 10 <sup>-3</sup> m <sup>2</sup> /s	---
DESTRUCTIVE TESTING (MIN) • SHEAR STRENGTH <sup>(10)(12)</sup> • PEEL ADHESION <sup>(11)(12)</sup>	ASTM D-6392	80 lb/in 60 lb/in FUSION 52 lb/in EXTRUSION	100 lb/in 760 lb/in FUSION 65 lb/in EXTRUSION	108 lb/in 90 lb/in FUSION 78 lb/in EXTRUSION

- (1) TEST EACH SIDE OF THE TEXTURED GEOMEMBRANE RECORDING A MEASUREMENT EVERY LINEAL FOOT OF TEXTURED ROLL WIDTH.
- (2) MACHINE DIRECTION (MD) AND CROSS MACHINE DIRECTION (XMD) AVERAGE VALUES SHOULD BE ON THE BASIS OF 5 TEST SPECIMENS EACH DIRECTION.
  - YIELD ELONGATION IS CALCULATED USING A GAGE LENGTH OF 1.3 INCHES.
  - BREAK ELONGATION IS CALCULATED USING A GAGE LENGTH OF 2.0 INCHES.
- (3) THE SP-NCTL TEST IS NOT APPROPRIATE FOR TESTING GEOMEMBRANES WITH TEXTURED OR IRREGULAR ROUGH SURFACES. TEST SHOULD BE CONDUCTED ON SMOOTH EDGES OF TEXTURED ROLLS OR ON SMOOTH SHEETS MADE FROM THE SAME FORMULATION AS BEING USED FOR THE TEXTURED MATERIALS.
- (4) OTHER METHODS SUCH AS D 4218 (MUFFLE FURNACE) OR MICROWAVE METHODS ARE ACCEPTABLE IF AN APPROPRIATE CORRELATION TO D-1603 (TUBE FURNACE) CAN BE ESTABLISHED.
- (5) CARBON BLACK DISPERSION (ONLY NEAR SPHERICAL AGGOMERATES) FOR 10 DIFFERENT VIEWS.
- (6) THE MANUFACTURER HAS THE OPTION TO SELECT EITHER ONE OF THE OIT METHODS LISTED TO EVALUATE THE ANTIOXIDANT CONTENT IN THE GEOMEMBRANE.
- (7) IT IS ALSO RECOMMENDED TO EVALUATE SAMPLES AT 30 AND 60 DAYS TO COMPARE WITH THE 90 DAY RESPONSE.
- (8) THE CONDITION OF THE TEST SHOULD BE 20 HR. UV CYCLE AT 75° C FOLLOWED BY 4 HR. CONDENSATION AT 60° C.
- (9) NOT RECOMMENDED SINCE THE HIGH TEMPERATURE OF THE STD-OIT TEST PRODUCES AN UNREALISTIC RESULT FOR SOME OF THE ANTIOXIDANTS IN THE UV EXPOSED SAMPLES.
- (10) UV RESISTANCE IS BASED ON PERCENT RETAINED VALUE REGARDLESS OF THE ORIGINAL HP-OIT VALUE.
- (11) BASED ON GRI GM13, REV. 6, 6/23/03.
- (12) THE SHEAR STRENGTH VALUE IS AT MATERIAL YIELD POINT.
- (13) FOR PEEL ADHESION, SEAM SEPARATION SHALL NOT EXCEED MORE THAN 10% INTO THE SEAM.
- (14) VALUE LISTED FOR SHEAR AND PEEL STRENGTHS ARE FOR 4 OUT OF 5 TEST SPECIMENS; THE 5<sup>TH</sup> SPECIMEN CAN BE AS LOW AS 80% OF THE LISTED VALUES.
- (15) TRANSMISSIVITY SHALL BE MEASURED USING WATER AT 20°F WITH A GRADIENT OF 0.33, UNDER A VERTICAL STRESS OF 250 PSF, AFTER 1 HOUR. TEST CONFIGURATION FROM TOP TO BOTTOM SHALL MATCH THE FINAL COVER.

PROPERTIES	TEST METHOD	MANUFACTURER QC TEST FREQUENCY <sup>(2)</sup>	CONFORMANCE QA TEST FREQUENCY	REQUIRED TEST VALUES 8 oz/sy	REQUIRED TEST VALUES 16 oz/sy
MASS/UNIT AREA (MIN. AVE.)	ASTM D-3776/D-5261	1 PER 100,000 SF	1 PER 100,000 SF	8 oz/sy	16 oz/sy
APPARENT OPENING SIZE (MAX.)	ASTM D-4751	1 PER 540,000 SF	1 PER PROJECT <sup>(1)</sup>	0.212 mm	0.180 mm
GRAB STRENGTH (MIN. AVE.)	ASTM D-4632	1 PER 100,000 SF	1 PER 100,000 SF	215 lbs	325 lbs
TRAPEZOIDAL TEAR STRENGTH (MIN. AVE.)	ASTM D-4533	1 PER 100,000 SF	1 PER 100,000 SF	85 lbs.	130 lbs.
PUNCTURE STRENGTH (MIN. AVE.)	ASTM D-4833	1 PER 100,000 SF	1 PER 100,000 SF	90 lbs	170 lbs
BURST STRENGTH (MIN. AVE.)	ASTM D-3786	1 PER 100,000 SF	1 PER 100,000 SF	375 psi	675 psi
UV RESISTANCE	ASTM D-4355/053	CERTIFY	N/A	70% <sup>(3)</sup>	70% <sup>(3)</sup>
PERMITTIVITY (MIN.)	ASTM D-4491	1 PER 540,000 SF	1 PER PROJECT <sup>(1)</sup>	1.0 sec <sup>-1</sup>	0.5 sec <sup>-1</sup>

- (1) AOS AND PERMITTIVITY SHALL ONLY BE TESTED FOR GEOTEXTILES USED IN FILTER APPLICATIONS.
- (2) MANUFACTURER MAY ELECT TO PROVIDE CERTIFICATION VALUES FOR GEOTEXTILES.
- (3) AFTER 500 HOURS OF EXPOSURE.
- (4) THERE IS NO REQUIRED CONFORMANCE TESTING FOR THE FINAL CLOSURE GEOSYNTHETICS. ONLY MANUFACTURER'S QUALITY CONTROL (MQC) DATA IS REQUIRED.

PROPERTIES	TEST METHOD	MANUFACTURER QC TEST FREQUENCY	CONFORMANCE QA TEST FREQUENCY	REQUIRED TEST VALUES
GEONET THICKNESS (MIN. AVE.)	ASTM D-751 OR ASTM D-5199	1 PER 50,000 SF	1 PER 100,000 SF	200 mil
GEONET MASS/UNIT AREA (MIN. AVE.)	ASTM D-5261	1 PER 50,000 SF	1 PER 100,000 SF	8oz/ft <sup>2</sup>
GEONET DENSITY (AVE.)	ASTM D-1505	1 PER RESIN BATCH	1 PER 100,000 SF	0.94 g/cm <sup>3</sup>
GEONET CARBON BLACK CONTENT (RANGE)	ASTM D-1603 <sup>(2)</sup>	1 PER 50,000 SF	N/A	2-3%
GEONET TENSILE STRENGTH (MIN. AVE.)	ASTM D-5035 Mod.	1 PER 50,000 SF	N/A	45 lbs/in
COMPOSITE TRANSMISSIVITY <sup>(1)</sup> (MIN. AVE.)	ASTM D-4716	1 PER LOT OR 100,000 SF	1 PER LOT	SEE NOTE 1

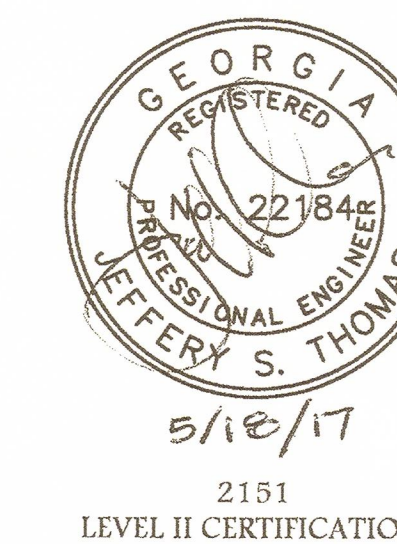
1. TRANSMISSIVITY SHALL BE MEASURED IN A 12-INCH X 12-INCH BOX WITH ADJACENT CONDITIONS MATCHING DETAIL, 100 HOUR DURATION AND 0.1 GRADIENT. FOR MSW CELL BASE LINER GEOCOMPOSITE THE VALUE SHALL BE AT LEAST 4.5 X 10<sup>-4</sup> M<sup>2</sup>/SEC AT 790 PSF, 1.52 X 10<sup>-4</sup> M<sup>2</sup>/SEC AT 3,950 PSF AND 2.89 X 10<sup>-5</sup> M<sup>2</sup>/SEC AT 9,362 PSF. THE TRANSMISSIVITY OF THE MATERIALS INSTALLED SHALL BE EQUAL TO OR GREATER THAN THE CONDITIONS STATED ABOVE BASED ON THE SPECIFIC CONDITION LOADING EXPECTED AT EACH LANDFILL AREA.
2. OTHER METHODS SUCH AS D-4218 (MUFFLE FURNACE) OR MICROWAVE METHODS ARE ACCEPTABLE IF AN APPROPRIATE CORRELATION TO D-1603 (TUBE FURNACE) CAN BE ESTABLISHED.
3. THERE IS NO REQUIRED CONFORMANCE TESTING FOR THE FINAL CLOSURE GEOSYNTHETICS. ONLY MANUFACTURER'S QUALITY CONTROL (MQC) DATA IS REQUIRED.

PROPERTIES	TEST METHOD	MANUFACTURER QC TEST FREQUENCY	CONFORMANCE QA TEST FREQUENCY	REQUIRED TEST VALUES
GRAB TENSILE STRENGTH (MIN. AVE.)	ASTM D-4632	CERTIFY	N/A	250 lbs
GRAB TENSILE ELONGATION (MIN. AVE.)	ASTM D-4632	CERTIFY <sup>(2)</sup>	N/A	34%
TRAPEZOIDAL TEAR STRENGTH (MIN. AVE.)	ASTM D-4533	CERTIFY	N/A	65 lbs.
PUNCTURE STRENGTH (MIN. AVE.)	ASTM D-4833	CERTIFY	N/A	140 lbs
BURST STRENGTH (MIN. AVE.)	ASTM D-3786	CERTIFY	N/A	500 psi
PERMITTIVITY (MIN.)	ASTM D-4491	CERTIFY	N/A	0.02 sec <sup>-1</sup>
WATER FLOW RATE (MIN.)	ASTM D-4491	CERTIFY	N/A	5 gal/min/ft <sup>2</sup>
UV RESISTANCE	ASTM D-4355	CERTIFY	N/A	90% <sup>(3)</sup>
PERCENT OPEN AREA (POA) (MIN.)	OPENING AREA TOTAL AREA x 100	CERTIFY	N/A	10 to 20%

- (1) POA AND PERMITTIVITY SHALL ONLY BE TESTED FOR GEOTEXTILES USED IN FILTER APPLICATIONS.
- (2) MANUFACTURER MAY ELECT TO PROVIDE CERTIFICATION VALUES FOR GEOTEXTILES.
- (3) AFTER 500 HOURS OF EXPOSURE.
- (4) THERE IS NO REQUIRED CONFORMANCE TESTING FOR THE FINAL CLOSURE GEOSYNTHETICS. ONLY MANUFACTURER'S QUALITY CONTROL (MQC) DATA IS REQUIRED.



ATLANTIC COAST  
CONSULTING, INC.  
630 Colonial Park Drive  
Suite 110  
Roswell, GA 30075  
o 770.594.5998  
f 770.594.5967  
www.atlcc.net



PROJECT:  
**SUPERIOR LANDFILL &  
RECYCLING CENTER  
SITE No. 2 MSWL  
EXPANSION  
D&O PLANS**  
PERMIT No.: 025-070D(MSWL)



WM of Georgia, Inc.  
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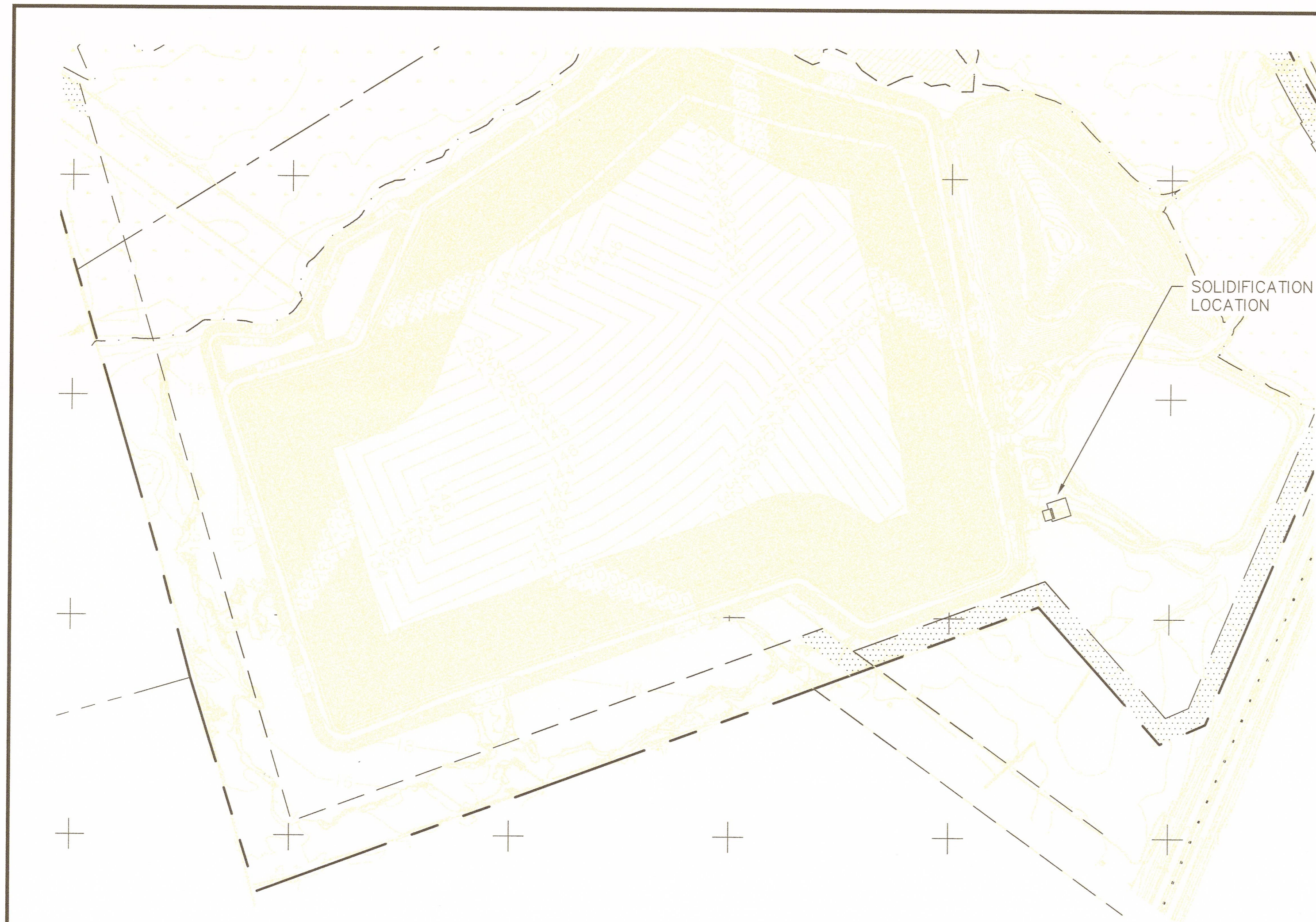
No.	Description	Date
1.	CCR Management	05/18/2017

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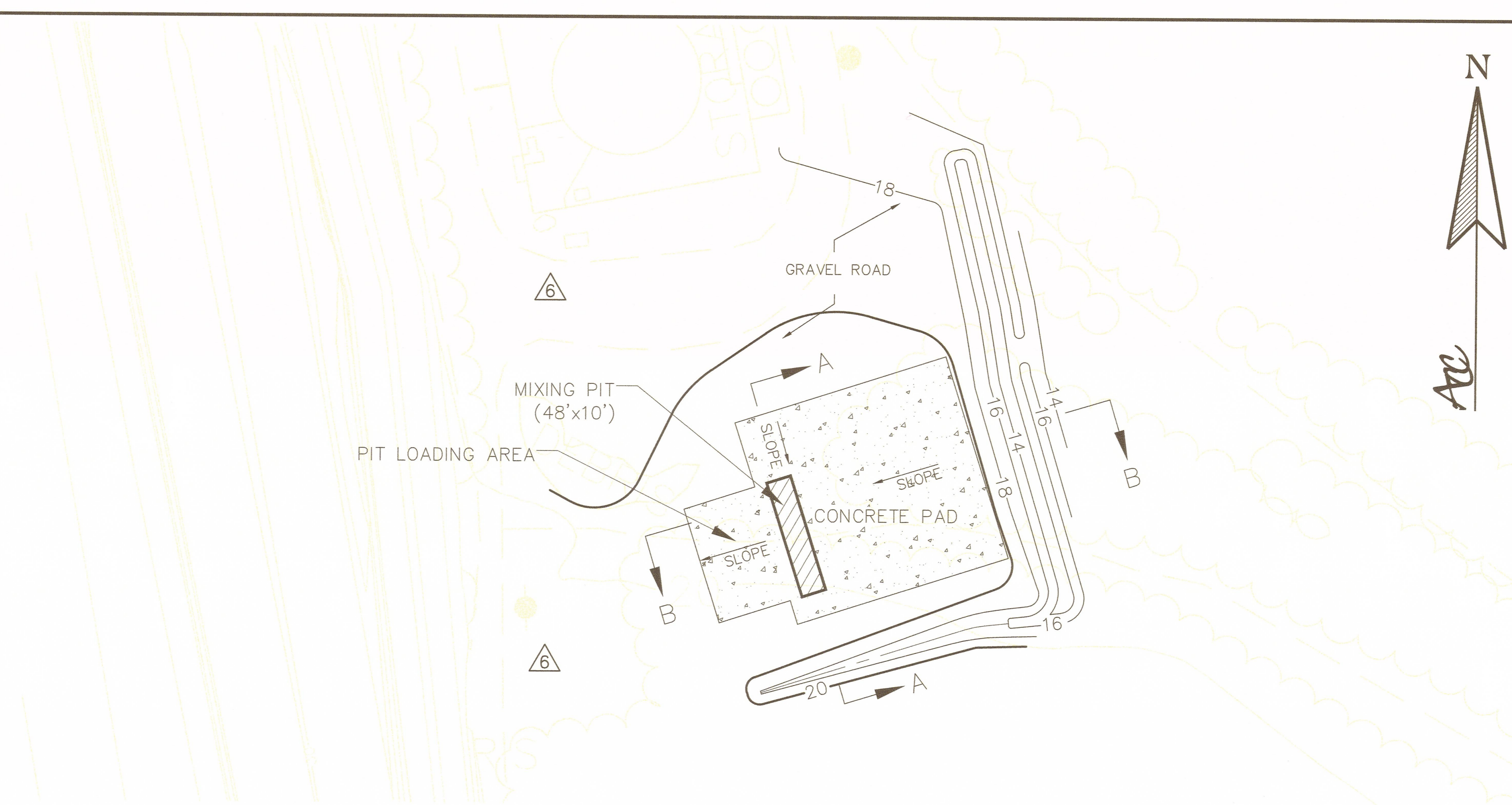
PROJECT NUMBER:  
**IO10-215**  
February 2014

**CONSTRUCTION  
QUALITY  
ASSURANCE PLAN**

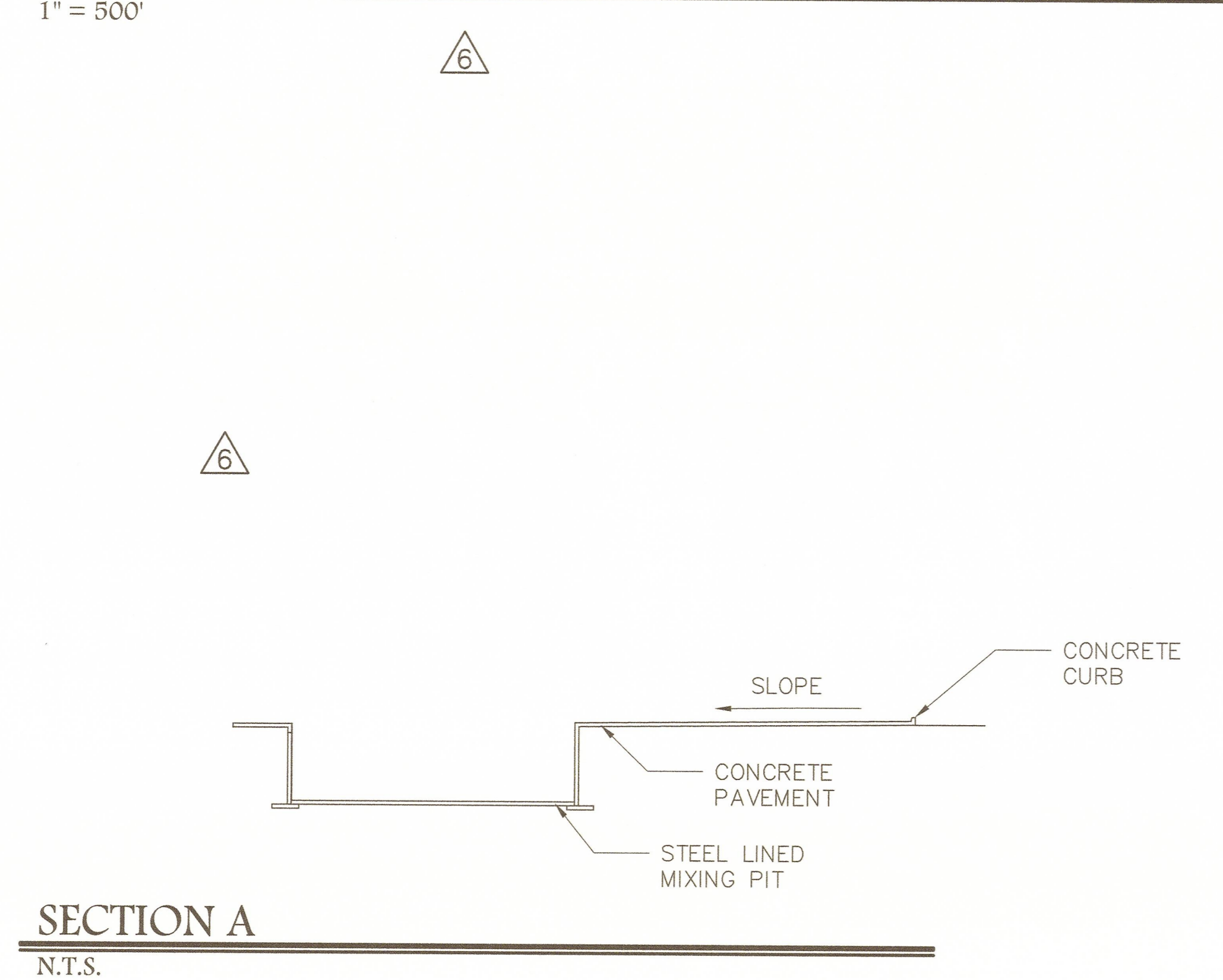
GEORGIA  
Environmental Protection Division  
Solid Waste Management Program  
**MINOR MODIFICATION APPROVAL**  
SOLID WASTE PERMIT NO. 025-070D(MSWL)  
APPROVED BY: [Signature] DATE: 05/22/2017



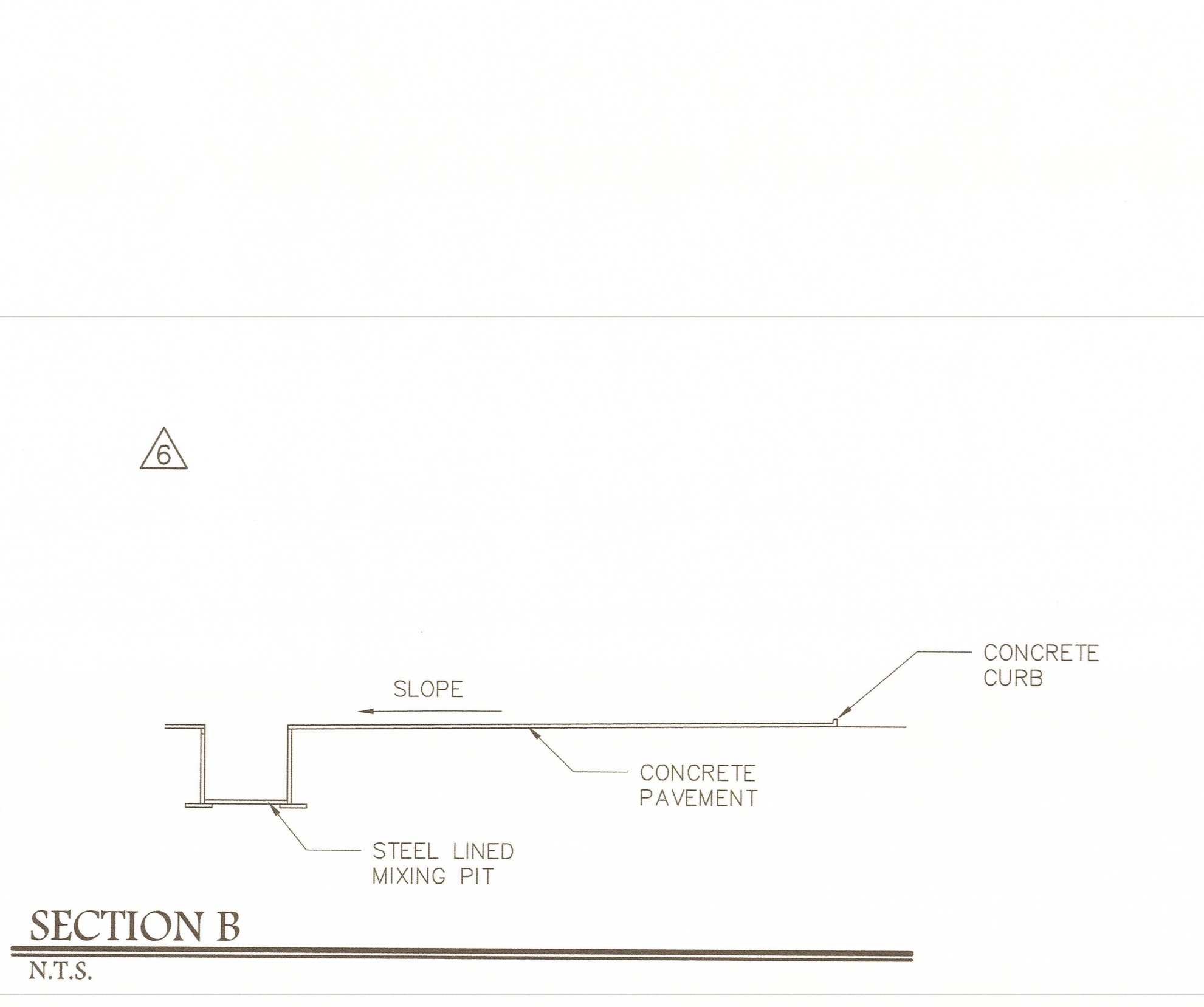
**SOLIDIFICATION FACILITY LOCATION PLAN**  
1" = 500'



**SOLIDIFICATION FACILITY PLAN**  
1" = 40'



**SECTION A**  
N.T.S.



**SECTION B**  
N.T.S.

**GENERAL NOTES:**

- SOLIDIFICATION: LIQUIDS SOLIDIFICATION SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
- WASTE STREAMS:**
- ALL WASTES TO BE SOLIDIFIED WILL BE PROCESSED IN ACCORDANCE WITH THE PROHIBITED WASTE EXCLUSION PLAN PER ITEM 28 ON SHEET 22 OF THESE PLANS.
  - NO LIQUID WASTES FROM INCOMPATIBLE WASTE STREAMS WILL BE MIXED AS PART OF THIS PROCESS. COMPATIBILITY WILL BE DETERMINED BY THE OPERATOR'S REVIEW OF THE LIQUID WASTE CHARACTERIZATION AS SPECIFIED BELOW.
  - BULKING AGENTS USED MAY INCLUDE ONE OR MORE OF THE FOLLOWING: WOOD BARK, WOOD CHIPS, SAW DUST, NON-CCR ASH, KILN DUST, SOILS, AUTO-SHREDDER FLUFF, OTHER CELLULOSE PRODUCTS AND OTHER INERT MATERIALS.
  - LIQUID AGENTS USED MAY INCLUDE: LEACHATE, SEMI-LIQUID WASTE OR OTHER NON-HAZARDOUS LIQUIDS.
- WASTE ACCEPTANCE PLAN:**
- ANY WASTE THAT WILL BE ACCEPTED FOR SOLIDIFICATION PROCESSING MUST BE CHARACTERIZED AND CONSIDERED NON-HAZARDOUS. THE WASTE GENERATOR WILL SUPPLY SUPERIOR LANDFILL & RECYCLING CENTER (SLRC) WITH A WASTE CHARACTERIZATION OR LABORATORY REPORT SPECIFYING THE DETAILED WASTE PROFILE WHICH SHALL VERIFY THE NON-HAZARDOUS STATUS OF THE WASTE. ALSO A MANIFEST FOR EVERY TRUCK THAT THE WASTE GENERATOR SHIPS TO THE LANDFILL MUST BE RECORDED AND FILED SEPARATELY.
- MIXING METHODS:**
- MIXING SHALL BE IN GENERAL ACCORDANCE WITH ONE OF THE FOLLOWING TWO METHODS:
- SOLIDIFICATION BASINS WITHIN THE LANDFILL AREA:  
STEEL BOXES (APPROXIMATELY 16' BY 20' BY 10' DEEP) SHALL BE PLACED IN WASTE WITHIN THE LINED LANDFILLING AREA. THE BOXES SHALL BE INSTALLED WITH A MINIMUM OF SIX FEET OF WASTE BENEATH EACH. THE SITE MAY INSTALL AND UTILIZE UP TO FOUR SOLIDIFICATION BASINS. MIXING WILL BE PERFORMED BY AN EXCAVATOR OR BACKHOE. ONCE WASTES HAVE BEEN SOLIDIFIED, THEY WILL BE REMOVED FROM THE BASINS AND DISPOSED AT THE WORKING FACE. THE BASINS SHALL BE COVERED WHEN NOT IN USE TO PREVENT RAINWATER ACCUMULATION.
  - SOLIDIFICATION FACILITY:  
SOLIDIFICATION USING CONSTRUCTED PIT AND CONCRETE SLAB IS AS DETAILED BELOW.
- GENERAL OPERATIONS:**
- THE FOLLOWING INFORMATION WILL BE RECORDED AS PART OF WASTE SOLIDIFICATION ACTIVITIES AND KEPT IN THE FACILITY OPERATING RECORDS:
    - LIQUID MATERIAL DESCRIPTION/ WASTE PROFILE
    - SOLIDIFICATION AGENT DESCRIPTION/ WASTE PROFILE
    - DATE AND TIME OF SOLIDIFICATION
  - RANDOM BATCHES WILL BE SAMPLED AT LEAST ONCE PER OPERATIONAL DAY FOR PAINT FILTER TESTING TO CONFIRM IT MEETS DISPOSAL REQUIREMENTS.
  - ONLY SOLIDIFIED WASTE SHALL BE HAULED TO THE WORKING FACE FOR DISPOSAL.

**SOLIDIFICATION FACILITY OPERATIONS**

**LOCATION:**  
THE PROPOSED LOCATION FOR THE SOLIDIFICATION FACILITY IS ON THE SOUTHEAST SIDE OF SITE 1 (SEE LOCATION FIGURE). THE SUPERIOR SOLIDIFICATION FACILITY LAYOUT DRAWING SHOWS THE STEEL BOX WITH THE CONCRETE PAD.

**SOLIDIFICATION PIT:**  
A STEEL LINED SOLIDIFICATION BOX (APPROXIMATELY 48'X10'X10') WILL BE SET IN THE GROUND AS SHOWN IN SECTION B ON THIS SHEET. THE BOX WILL HAVE AN ADJACENT CONCRETE PAD ALLOWING TRUCKS TO BACK UP TO THE BOX FOR BOTH UNLOADING AND LOADING OF WASTE. TIRE-STOPS FOR THE TRUCK WILL BE PLACED SO THAT THE WASTE CAN BE DUMPED INTO THE CONCRETE PIT. THE BOX IS PROPOSED TO BE CONCRETE LINED WITH STEEL PLATING AND WILL BE DESIGNED TO PREVENT UPLIFTING DUE TO BUOYANCY.

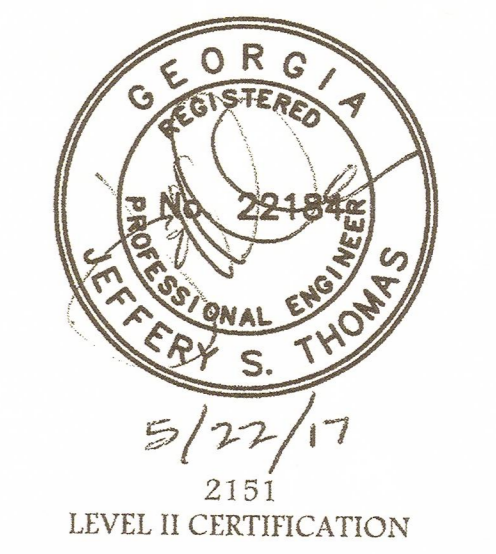
**CONCRETE PAD:**  
DURING SOLIDIFICATION PROCESSING OPERATIONS, SOLIDIFICATION MATERIALS AS LISTED ABOVE WILL BE OFF-LOADED ONTO THE CONCRETE PAD. THE ENTIRE CONCRETE PAD AREA WILL BE SLOPED TO DRAIN INTO THE PIT. NO WASTE MATERIALS WILL BE UNLOADED ONTO THE AREA LABELED "PIT LOADING AREA". THIS AREA IS TO BE USED BY TRUCKS FOR DIRECT UNLOADING INTO THE PIT.

**OPERATIONAL NARRATIVE:**  
OPERATIONS SHALL NOT BEGIN PRIOR TO CERTIFICATION OF CONSTRUCTION IN ACCORDANCE WITH NOTE 31 OF SHEET 22 OF THESE D&O PLANS. LIQUID WASTE PROPOSED TO BE SOLIDIFIED AT THE FACILITY WILL BE DIRECTED BY LANDFILL PERSONNEL TO THE PIT AREA. THE LIQUID WASTE WILL BE UNLOADED INTO THE CONCRETE SOLIDIFICATION PIT. THE AMOUNT OF LIQUID IN THE PIT SHALL NOT EXCEED THE AMOUNT DETERMINED BY THE APPROPRIATE MIXING RATIO WITH THE PROPOSED SOLIDIFICATION AGENT. THE OPERATOR SHALL MARK THE SIDES OF THE PIT TO INDICATE MAXIMUM LIQUID LEVEL. ONCE THE WASTE IS READY TO BE SOLIDIFIED, THE REQUIRED AMOUNT OF SOLIDIFYING AGENT WILL BE ADDED INTO THE BOX FROM THE CONCRETE PAD OR DIRECTLY FROM A TRANSPORT VEHICLE. ONCE THE SOLIDIFYING AGENT HAS SETTLED, THE AGENT AND WASTE WILL BE MIXED UNTIL THE BOX HAS A UNIFORM MIXTURE. IF A SET-UP TIME IS REQUIRED, THE MIXTURE WILL BE ALLOWED TO SET-UP INTO ITS SOLID FORM. THE OPERATOR WILL TEST SOLIDIFIED WASTE AT LEAST ONCE PER DAY VIA A PAINT FILTER TEST TO CONFIRM COMPLIANCE. THE SOLIDIFIED MIX WILL BE LOADED INTO A LANDFILL HAULING TRUCK AND IT WILL THEN BE SENT TO THE ACTIVE FACE OF THE LANDFILL FOR DISPOSAL. THIS FACILITY HAS SLOPED CONCRETE PAD SO THAT THERE CAN BE EFFICIENT CLEANUP IF ANY WASTE ACCIDENTALLY SPILLS DURING THE UNLOADING, MIXING, AND LOADING OPERATIONS. WITH ANY SPILLAGE, LANDFILL PERSONNEL WILL SCOOP THIS MATERIAL UP OFF THE CONCRETE SURFACE AND IT WILL EITHER BE PLACED BACK INTO THE BOX OR UP INTO THE TRUCK AS APPROPRIATE FOR THE WASTE CONDITION. WASTE MATERIALS SHALL NOT BE STORED ON THE CONCRETE PAD OR IN THE PIT EXCEPT DURING ACTIVE SOLIDIFICATION OPERATIONS. NO WASTE MATERIALS SHALL BE STORED UNCOVERED FOR LONGER THAN SEVEN DAYS.

**GROUNDWATER MONITORING:**  
THE GROUNDWATER UPGRADIENT AND DOWNGRADIENT OF THE SOLIDIFICATION PIT SHALL BE MONITORED IN ACCORDANCE WITH THE APPROVED GROUNDWATER MONITORING PLAN WHILE THE SOLIDIFICATION PIT IS OPERATIONAL.

**COST OF CLEANUP:**  
THE COST OF CLEANUP AND REMOVAL OF THIS SOLIDIFICATION PIT IS ESTIMATED TO BE \$30,000. THIS AMOUNT HAS BEEN ADDED TO THE CLOSURE COSTS FOR SLRC.

**ACC**  
ATLANTIC COAST CONSULTING, INC.  
630 Colonial Park Drive  
Suite 110  
Roswell, GA 30075  
o 770.594.5998  
f 770.594.5967  
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PERMIT No.: 025-070D(MSWL)



WM of Georgia, Inc.  
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Savannah, Ga 31419

**REVISIONS**

0. Initial Issue	12/08/2009
1. Response to comments	11/05/2010
2. Response to comments	3/16/2011
3. General Revisions	12/19/2012
4. Silo Size	01/29/2013
5. General Revisions	12/23/2014
6. Response to Comments	02/17/2015
7. CCR Management	04/05/2017
8. Response to Comments	05/22/2017

Drawn by: JST  
Checked by: [Signature]

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GEORGIA  
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**SOLIDIFICATION PLAN**