

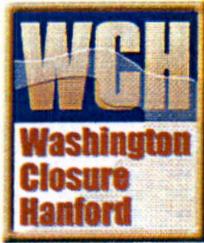
0094055

FINAL REPORT

CONSTRUCTION QUALITY ASSURANCE (CQA)

SECTION

19 OF 20



FINAL REPORT
CONSTRUCTION QUALITY ASSURANCE (CQA)
ENVIRONMENTAL RESTORATION DISPOSAL FACILITY (ERDF)
SUPER CELLS 9 & 10
SUBCONTRACT S013213A00
010.032-00-ROB

M.3

PHOTOGRAPH LOG



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 1 (2/08/10 TO 2/12/10)

Base Soil Excavation	
 <p>09/02/2010 09:14 AM</p>	 <p>09/02/2010 09:24 AM</p>
Facing E (2/10/10) – TWS excavating base soil from the Cell 10 footprint.	Facing NW (2/10/10) – TWS excavating base soil from the Cell 10 footprint.
 <p>09/02/2010 03:19 PM</p>	 <p>10/02/2010 12:42 PM</p>
Facing NW (2/10/10) – TWS stockpiling base soil south of Cell 10.	Facing NW (2/11/10) – TWS excavating base soil from the Cell 10 footprint.
 <p>11/02/2010 02:07 PM</p>	 <p>11/02/2010 02:07 PM</p>
Facing NE (2/12/10) – TWS excavating base soil from the Cell 10 footprint.	Facing NE (2/12/10) – TWS excavating base soil from the Cell 10 footprint.
Note: Dates are incorrect on photographs. Correct dates appear in annotation below photographs.	



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 2 (2/15/10 TO 2/19/10)

Base Soil Excavation	
	
Facing SE – TWS excavating the base soil from the Cell 10 footprint.	Facing NE – TWS excavating the base soil from the Cell 10 footprint.
	
Facing SE – TWS excavating the base soil with the CAT 5110 from the Cell 10 footprint.	Facing E – TWS excavating the base soil from the Cell 10 footprint.
	
Facing E – The CAT 5110 excavating base soil from the Cell 10 footprint.	
Note: Dates are incorrect on some photographs. Corrected dates appear in the annotation below the incorrectly labeled photographs.	



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 2 (2/15/10 TO 2/19/10)

North Berm Construction	
	
Facing S (2/15/10) – TWS scarifying the subgrade on the north berm with a CAT D6R.	Facing E (2/16/10) – TWS recompacting the subgrade on the north berm with the payhauler water truck.
	
Facing E – TWS placing lift 1 of the Cell 10 north embankment.	Facing E – TWS compacting the first lift on the north embankment with the payhauler water truck.
	
Facing E – TWS moisture conditioning and placing lift 2 on the north embankment.	Facing S – TWS moisture conditioning and compacting lift 2 on the north berm.
Note: Dates are incorrect on some photographs. Corrected dates appear in the annotation below the incorrectly labeled photographs.	



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 3 (2/22/10 TO 2/26/10)

Cell 10 Excavation	
	
Facing SE – TWS excavating operations layer soil from Cell 10 with the CAT 5110	Facing SE – TWS excavating operations layer soil from Cell 10 with the CAT 5110
	
Facing N (2/24/2010) – TWS excavating operations layer soil from Cell 10 with the CAT 5110	Facing NE – TWS excavating operations layer soil from Cell 10 with the CAT 5110



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 3 (2/22/10 TO 2/26/10)

North Embankment Construction	
 <p>02/22/2010 08:21 AM</p>	 <p>02/22/2010 09:16 AM</p>
Facing E – TWS placing the third lift on the north embankment.	Facing E – TWS watering the third lift on the north embankment.
 <p>02/22/2010 10:16 AM</p>	
Facing E – TWS compacting the third lift on the north embankment.	Facing S – TWS excavating old utility trench across N. embankment.
 <p>02/25/2010 09:53 AM</p>	 <p>02/25/2010 10:23 AM</p>
Facing E – TWS placing the fifth lift on the north embankment.	Facing E – TWS watering and compacting the fifth lift on the north embankment.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 3 (2/22/10 TO 2/26/10)

South Embankment Construction	
 <p>02/22/2010 09:19 AM</p>	 <p>02/26/2010 09:39 AM</p>
Facing E – TWS placing the third lift on the north embankment.	Facing E – TWS watering the third lift on the north embankment.
 <p>02/26/2010 09:52 AM</p>	
Facing E – TWS compacting the third lift on the north embankment.	

**CQA PHOTOGRAPH LOG WEEK 4
(3/1/10 TO 3/5/10)**

Cell 10 Excavation	
 <p>03/01/2010 08:23 AM</p>	 <p>03/01/2010 09:53 AM</p>
<p>Facing NW – TWS utilizing two CAT excavators to excavate from Cell 10.</p>	<p>Facing W – TWS utilizing two CAT excavators to excavate from Cell 10.</p>
 <p>03/01/2010 10:16 AM</p>	 <p>03/01/2010 12:07 PM</p>
<p>Facing NW – TWS utilizing the CAT 5110 and the Hitachi 1800 to excavate from Cell 10.</p>	<p>Facing NE – TWS utilizing the CAT 5110 and the Hitachi 1800 to excavate from Cell 10.</p>
 <p>03/04/2010 07:07 AM</p>	 <p>03/04/2010 03:45 PM</p>
<p>Facing NW – TWS utilizing a Hitachi 200 to build the Run on Control Berm along the east side of Cell 10</p>	<p>Facing NE – TWS replacing the bucket on the CAT 5110 with a 13-cy bucket.</p>



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 4 (3/1/10 TO 3/5/10)

North Embankment Construction	
 <p>03/02/2010 07:19 AM</p>	 <p>03/02/2010 12:30 PM</p>
Facing E – TWS watering seventh lift on the north embankment prior to placing the eighth lift.	Facing E – TWS placing the eighth lift on the north embankment
 <p>03/03/2010 09:08 AM</p>	 <p>03/04/2010 01:35 PM</p>
Facing E – TWS watering and compacting the ninth lift on the north embankment.	Facing E – TWS placing the tenth lift on the north embankment.
 <p>03/05/2010 08:41 AM</p>	
Facing E – TWS watering and compacting the eleventh lift on the north embankment.	



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 4 (3/1/10 TO 3/5/10)

South Embankment Construction



Facing E – TWS placing the third lift on the south embankment.



Facing E – TWS placing and watering the fourth lift on the south embankment.



Facing E – TWS utilizing the weight of the "Ladybug" water truck to compact the sixth lift on south embankment.



Facing E – TWS compacting the sixth lift on the south embankment.



Facing E – TWS placing the ninth lift on the south embankment.



Facing E – TWS watering and compacting the ninth lift on the south embankment.

**CQA PHOTOGRAPH LOG WEEK 4
(3/1/10 TO 3/5/10)**

Cell 9 Liner Tie-In



Facing S (Correct Time - 12:20) - TWS utilizing the CAT 312 excavator and a spotter to expose the Cell 9 Liner tie in.



Facing S (Correct Time 12:38) - TWS utilizing the CAT 312 excavator and a spotter to expose the Cell 9 Liner tie in.



Facing N (Correct Time 8:33) - TWS exposing the Cell 9 Liner tie in with the excavator and hand digging.



Facing S (Correct Time 8:41) - TWS utilizing hand digging to remove the last few inches of overburden from the line tie in.



Facing S (Correct Time 8:28) - TWS utilizing the CAT 312 excavator to expose the Cell 9 liner tie in.



(Correct Time 8:31) TWS utilizing hand digging to remove soil close to liner and geotextile.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 6 (3/15/10 TO 3/19/10)

Cell 10 Excavation	
 <p>03/15/2010 01:11 PM</p>	 <p>03/16/2010 08:35 AM</p>
Facing NE – TWS excavating from Cell 10.	Facing NE – TWS excavating from Cell 10.
 <p>03/16/2010 08:35 AM</p>	 <p>03/17/2010 09:00 AM</p>
Facing NE – TWS excavating from Cell 10.	Facing SE – TWS excavating from Cell 10.
 <p>03/19/2010 07:28 AM</p>	 <p>03/19/2010 09:42 AM</p>
Facing SE – TWS excavating from Cell 10.	Facing NE – TWS excavating from Cell 10.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 6 (3/15/10 TO 3/19/10)

Cell 9 Subgrade	
	
Facing SW – TWS cutting the Cell 9 south embankment to grade.	Facing N – TWS cutting the Cell 9 north embankment to grade.
	
Facing S – A portion of the Cell 9 south embankment has been cut to grade.	Facing S – Overview of Cell 9.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 6 (3/15/10 TO 3/19/10)

Cell 9 Liner Tie-In



Facing SSW – TWS exposing the Cell 9/8 liner tie-in.

Facing SE – TWS exposing the Cell 9/8 liner tie-in.



Facing S – TWS exposing the Cell 9/8 liner tie-in.

Facing S – TWS exposing the Cell 9/8 liner tie-in.



Facing S – TWS exposing the Cell 9/8 liner tie-in.

Facing S – TWS exposing the Cell 9/8 liner tie-in.

**CQA PHOTOGRAPH LOG WEEK 6
(3/15/10 TO 3/19/10)**

Pugmill Assembly	
 <p>03/16/2010 12:01 PM</p>	 <p>03/16/2010 12:38 PM</p>
Facing E – TWS erecting the first bentonite silo.	Facing E – TWS erecting the first bentonite silo.
 <p>03/19/2010 12:45 PM</p>	 <p>03/19/2010 10:19 AM</p>
Facing E – TWS setting the pug.	Facing E – TWS erecting the second bentonite silo.
 <p>03/19/2010 02:00 PM</p>	 <p>03/19/2010 03:35 PM</p>
Facing E – TWS setting the pugmill hopper.	Facing E – TWS setting the base soil conveyor belt.

CQA PHOTOGRAPH LOG WEEK 6
(3/15/10 TO 3/19/10)

Admix Test Pad	
<p>Facing SW – TWS using the CAT D6 GPS dozer to cut the Cell 9 floor to the subgrade elevation in and around the test pad area.</p>	<p>Facing NW – TWS moisture conditioning the area for the test pad.</p>
<p>Facing S – TWS has utilized the vibratory drum compactor to compact the test pad area.</p>	

**CQA PHOTOGRAPH LOG WEEK 6
(3/15/10 TO 3/19/10)**

Lysimeter	
<p>03/18/2010 07:47 PM</p>	<p>03/19/2010 07:26 AM</p>
<p>Facing S – TWS excavating the Lysimeter riser trench with the aid of GPS.</p>	<p>Facing S – TWS excavating the Lysimeter riser trench with the aid of GPS.</p>
<p>03/19/2010 11:39</p>	<p>03/19/2010 11:46</p>
<p>Facing S – TWS excavating the Lysimeter riser trench with the aid of GPS.</p>	<p>Facing S – TWS excavating the Lysimeter riser trench with the aid of GPS.</p>
<p>03/19/2010 11:39</p>	
<p>Facing S – TWS excavating the Lysimeter riser trench with the aid of GPS.</p>	



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 6 (3/15/10 TO 3/19/10)

Leachate Transmission Line	
 <p>03 18 2010 08 59</p>	 <p>03 18 2010 09 00</p>
Facing SE – CQA inspecting the excavation for MH-21	Facing SE – CQA inspecting the excavation for MH-21
 <p>03 18 2010 09 31</p>	 <p>03 18 2010 09 19</p>
Facing SE – CQA inspecting the excavation for MH-39	Facing SE – CQA inspecting the excavation for MH-39



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 7 (3/22/10 TO 3/26/10)

Cell 10 Excavation



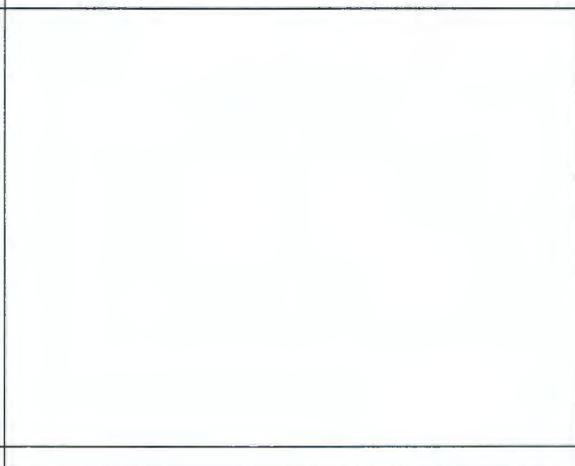
Facing SE – Cell 10 Excavation

Facing NW – Cell 10 Excavation



Facing N – Cell 10 Excavation

Facing SE – Cell 10 Excavation



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 7
(3/22/10 TO 3/26/10)

Admix	
	
Facing E – Pugmill setup.	Facing E – Pugmill setup.
	
Facing N – TWS keeping the Cell 9 subgrade moisture conditioned.	Facing W – Pugmill setup.
	
TWS connecting readout panel in the P9 (west) bentonite silo.	Facing N – Pugmill setup.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 7
(3/22/10 TO 3/26/10)

Admix	
	
Powell Scale Co. calibrating the P19 (east) bentonite silo.	Calibration weights hanging from the P19 (east) silo
	
Bentonite silo P19 (east) scale calibration readout..	Pugmill set up
	
Unloading P19(east) silo.	

CQA PHOTOGRAPH LOG WEEK 7
(3/22/10 TO 3/26/10)

Leachate Transmission Line	
<p>03/22/2010 12:42 PM</p>	<p>03/22/2010 12:48 PM</p>
<p>Facing NW – TWS preparing to set MH-21.</p>	<p>Facing NW – TWS placing MH-21.</p>
<p>03/23/2010 08:50 AM</p>	<p>03/23/2010 03:00 PM</p>
<p>Facing E – TWS excavating MH-33</p>	<p>Facing E – TWS preparing the subgrade for MH-32</p>
<p>03/23/2010 03:20 PM</p>	
<p>Facing E – TWS moisture conditioning the subgrade for MH-32</p>	



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 8 (3/29/10 TO 4/2/10)

Cell 10 Excavation



Facing NE - Excavation from Cell 10

Facing NE - Excavation from Cell 10



Facing S - The CAT 5110 excavating from Cell 10.

Facing SE - The Hitachi 1800 excavating from Cell 10.



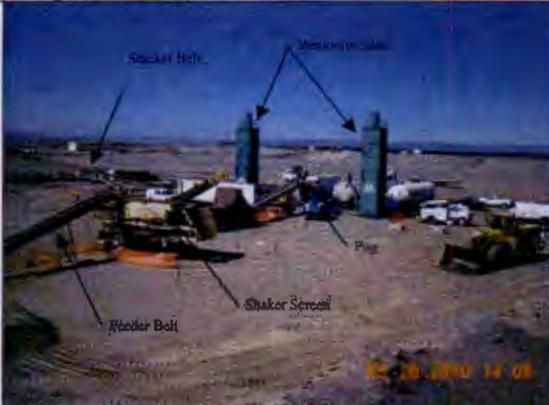
Facing W - The Hitachi 1800 excavating from Cell 10.

Facing W - The CAT 5110 excavating from Cell 10.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 8 (3/29/10 TO 4/2/10)

Admix	
	
Facing N – Preparing for bentonite calibration at the pugmill.	Facing N - Transferring bentonite from the P19 east silo into a waiting truck for calibration.
	
Facing N - Pugmill Setup	Facing NW - Belt scale calibration test.
	
Facing S - TWS sampling the base soil for moisture content verification.	Facing E – TWS beginning admix production.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 8 (3/29/10 TO 4/2/10)

Leachate Transmission Line	
 <p>03/31/2010 08:04 AM</p>	 <p>03/31/2010 10:12 AM</p>
<p>Facing N - TWS backfilling around MH-32.</p>	<p>Facing NE - TWS backfilling around MH-33.</p>
 <p>04/01/2010 09:36 AM</p>	 <p>04/01/2010 01:34 PM</p>
<p>Facing E - TWS excavating for MH-34.</p>	<p>Facing NE - TWS laying out the location of MH-34.</p>
 <p>04/02/2010 07:38 PM</p>	 <p>04/02/2010 04:49 PM</p>
<p>Excavation of MH-34. The fresh water discharge line from Cell 7 has been cut and capped.</p>	<p>Excavation of MH-34. The fresh water discharge line from Cell 7 has been cut and capped.</p>



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 9 (4/5/10 TO 4/9/10)

Cell 10 Excavation	
 <p>04 07 2010 09 58</p>	 <p>04/09/2010 09:59 AM</p>
Facing E – TWS utilizing the CAT 5110 to excavate from Cell 10.	Facing SE – TWS excavating from Cell 10
 <p>04/09/2010 10:03 AM</p>	 <p>04/09/2010 10:08 AM</p>
Facing NE – TWS excavating from Cell 10	Facing N – TWS excavating from Cell 10



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 9 (4/5/10 TO 4/9/10)

Cell 9 Subgrade



Facing S – TWS using the CAT D6 GPS dozer to cut the south interior slope of Cell 9 to grade.



Facing SE – TWS using the CAT D6 GPS dozer to cut the south interior slope of Cell 9 to grade.



Facing S – TWS mucking out the clippings from Cell 9.



Facing N – TWS mucking out the clippings from Cell 9.

**CQA PHOTOGRAPH LOG WEEK 9
(4/5/10 TO 4/9/10)**

Admix Placement - Admix Test Pad



Facing W – TWS and CQA surveyors checking the GPS on the CAT D6 GPS dozer.



Facing NW – TWS placing the first of the admix for the testpad.



Facing NW – TWS using the CAT D6 GPS dozer to spread the first lift of admix for the test pad.



Facing NW – TWS using the CAT 825 compactor to compact the first lift of the test pad..



TWS measuring the thickness of the first lift.



Facing W – CQA testing the density and moisture of the first lift..

**CQA PHOTOGRAPH LOG WEEK 9
(4/5/10 TO 4/9/10)**

Admix Placement - Admix Test Pad	
<p>CQA measuring the pegs on the CAT 825 compactor.</p>	<p>Facing NW – TWS moisture conditioning the test pad.</p>
<p>CQA collecting a Shelby tube sample for permeability testing.</p>	<p>Facing NW – TWS static rolling the test pad at the end of the first day to seal the surface.</p>
<p>Facing NW – TWS scarifying the test pad in preparation for placing the 4th lift.</p>	<p>Facing NW – TWS placing the 4th lift on the test pad using the Payhauler trucks.</p>

**CQA PHOTOGRAPH LOG WEEK 9
(4/5/10 TO 4/9/10)**

Admix Placement - Admix Test Pad



Facing NW – TWS static rolling the final lift of the test pad to demonstrate finishing of the admix liner layer.



Facing E – TWS excavating one of two test pits to demonstrate that all six lifts are bonded together seamlessly.



Facing NE – CQA digging the Boutwell boreholes



Facing NE – CQA preparing each hole for Boutwell installation.

**CQA PHOTOGRAPH LOG WEEK 9
(4/5/10 TO 4/9/10)**

<p>04 07 2010 09 51</p>	<p>04 07 2010 12 54</p>
<p>Facing NE – CQA preparing Boutwell testing boreholes using a Shop-Vac to clean excess debris from the bottom of the hole.</p>	<p>The bottom of the borehole with casing installed. Great care was taken to ensure each borehole was smooth and clean from all debris.</p>
<p>04 07 2010 13 37</p>	<p>04 07 2010 13 37</p>
<p>Facing S – CQA setting the East Boutwell by tamping bentonite and water around the casing.</p>	<p>CQA placing bentonite around Boutwell casings and tamping into place to seal the Boutwell.</p>
<p>04 07 2010 14 20</p>	<p>04 07 2010 14 20</p>
<p>Facing N – Boutwell casing installation complete.</p>	<p>Facing NW – Boutwell casing installation complete.</p>



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 9 (4/5/10 TO 4/9/10)

Leachate Transmission Line



Facing NE – Manhole MH-34 arriving on-site.

Facing E – TWS utilizing Hooks Crane service to set MH-34.



Facing E – TWS utilizing Hooks Crane service to set MH-34.

Facing E – TWS utilizing Hooks Crane service to set MH-34.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 9 (4/5/10 TO 4/9/10)

Cell 9 Crest Pad	
	
Facing W – TWS placing structural fill on Cell 9 Crest pad.	Facing E – TWS moisture conditioning the lifts placed on the Cell 9 Crest Pad.
	
Facing E – TWS using the CAT CS 563 smooth drum roller to compact the lifts placed on the Cell 9 Crest Pad.	Facing W – The completed Cell 9 Crest Pad.
	
Facing W – TWS has begun to place wooden form along the south and west side of the Crest Pad.	



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 10 (4/12/10 TO 4/16/10)

Cell 10 Excavation



Facing SE – TWS continuing Cell 10 excavation



Facing SE – TWS continuing Cell 10 excavation



Facing SE – TWS continuing Cell 10 excavation



Facing SW – TWS continuing Cell 10 excavation



Facing W – TWS continuing Cell 10 excavation



Facing NW – TWS continuing Cell 10 excavation

**CQA PHOTOGRAPH LOG WEEK 10
(4/12/10 TO 4/16/10)**

Cell 9 Subgrade



Facing SW – TWS mucking out Cell 9.



Facing N – TWS mucking out Cell 9.



Facing SW – TWS moisture conditioning the subgrade for Cell9.



Facing N – Rogers Surveying shooting the elevation of the Cell9 subgrade for TWS.



Facing N – Rogers Surveying shooting the elevation of the Cell 9.





ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 10 (4/12/10 TO 4/16/10)

Test Pad	
	
Facing N – Test pad Boutwell locations.	Facing N – Test Pad location in Cell 9.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 10 (4/12/10 TO 4/16/10)

Cell 9 Crest Pad	
	
Facing E – TWS building concrete forms for Cell 9 Crest Pad.	Facing W – TWS preparing the subgrade for Cell 9 Crest Pad.
	
Facing W – TWS building concrete forms for Cell 9 Crest Pad.	Facing W – TWS building concrete forms for Cell 9 Crest Pad.
	
Facing SW – TWS preparing the subgrade for Cell 9 Crest Pad.	Facing W – TWS building concrete forms for Cell 9 Crest Pad.

CQA PHOTOGRAPH LOG WEEK 10
(4/12/10 TO 4/16/10)

Leachate Transmission Line



Facing N – TWS compacting the backfill around MH-34.



Facing E – TWS and BMWC training on the HDPE pipe welder.



Facing S – The HDPE Fusion pipe welder.



Facing E – The first load of 16-in double encased HDPE pipe.



Facing N – BMWC offloading the 16-in double encased HDPE pipe.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 11
(4/19/10 TO 4/23/10)

Cell 10 Excavation



Facing S – TWS excavating from Cell 10.



Facing N – TWS excavating from Cell 10.



Facing SE – TWS excavating from Cell 10.



Facing SE – TWS excavating from Cell 10.



Facing SE – TWS excavating from Cell 10.



Facing SE – TWS excavating from Cell 10 and removing grade trimmings from the floor of Cell 9.

**CQA PHOTOGRAPH LOG WEEK 11
(4/19/10 TO 4/23/10)**

Cell 9 Subgrade Preparation	
<p>Facing S – TWS trimming the subgrade of Cell 9 with the CAT D6 GPS dozer.</p>	<p>Facing SW – Roger's Surveying conducting a subgrade survey of Cell 9.</p>
<p>Facing S – TWS trimming the subgrade of Cell 9 with the CAT D6 GPS dozer.</p>	<p>Facing SW – TradeWind Services removing subgrade trimmings from the floor of Cell 9.</p>

CQA PHOTOGRAPH LOG WEEK 11
(4/19/10 TO 4/23/10)

Cell 9 Crest Pad



Facing E – CQA inspecting the HDPE double containment pipe.



Facing W – TWS excavating the crest pad discharge trench.



Facing NE – BMWC welding the 4x8 in. double containment discharge pipe.



Facing SW – BMWC installing the 4x8 in. discharge riser in the Cell 9 crest pad building.



Facing S – Installation of the 4x8 in. double containment discharge pipe in the Cell 9 crest pad.



Facing NE – BMWC installing the 2x6 in. Cell 9 crest pad drain line in the Cell 9 crest pad building.

CQA PHOTOGRAPH LOG WEEK 11
(4/19/10 TO 4/23/10)

Cell 9 Crest Pad



Facing S – BMWC installing the 2x6 in. Cell 9 crest pad drain line in the Cell 9 crest pad building.



Facing N – BMWC preparing to pressure test the 2x6 in drainage line in the Cell 9 crest pad building.



Facing W – After hydrostatic testing failed, BMWC discovered a faulty O-ring, which was replaced.



Facing NW – DHI excavating unaccepted backfill from over the 4x8 in. discharge pipe in the Cell 9 crest pad building.



Facing down – TWS hydrostatically testing the 2 in. inner containment drainage line in the Cell 9 crest pad.



Facing SE – TWS excavating the Cell 9 discharge trench.

CQA PHOTOGRAPH LOG WEEK 11
(4/19/10 TO 4/23/10)

Cell 10 Crest Pad



Facing S – TWS excavating the discharge trench between MH-33 and the Cell 10 crest pad building.



Facing N – BMWC welding the 4x8 in. discharge pipe for the Cell 10 crest pad.



Facing N – BMWC installing the 4x8 in Cell 10 discharge pipe and riser.



Facing NE – DHI compacting backfill over the 4x8 in. Cell 10 discharge pipe.



Facing NE – DHI placing the metallic locator tape for the Cell 10 discharge pipe.



CQA PHOTOGRAPH LOG WEEK 11
(4/19/10 TO 4/23/10)

Leachate Transmission Line



Facing W – TWS setting grade for MH-36.



Facing W – TWS compacting drainage gravel for the subgrade of MH-36.



Facing W – TWS placing gravel for the subgrade of MH-37.



Facing NW – TWS placing MH-36.



Facing NW – TWS placing MH-36.



Facing S – TWS placing MH-37.

CQA PHOTOGRAPH LOG WEEK 11
(4/19/10 TO 4/23/10)

Leachate Transmission Line	
 <p>04 22 2010 14:13</p>	 <p>04 22 2010 15:26</p>
<p>Facing S – TWS installing the MH-37 rubber seal.</p>	<p>Facing N – TWS excavating MH-38.</p>
 <p>04 23 2010 09:34</p>	
<p>Facing E – TWS setting subgrade elevation on MH-38.</p>	



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 12 (4/26/10 TO 4/30/10)

Cell 10 Excavation	
	
Facing S – TWS excavating operations soil from Cell 10	Facing S – TWS excavating operations soil from Cell 10
	
Facing S – TWS excavating operations soil from Cell 10	Facing SW – TWS excavating operations soil from Cell 10
	
Facing E – TWS excavating the final lift from Cell 10.	Facing E – TWS excavating the final lift from Cell 10.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 12 (4/26/10 TO 4/30/10)

Cell 9 Subgrade	
	
Facing S – Cell 9 Subgrade.	Facing SW – Cell 9 Subgrade.
	
Facing S – Cell 9 Subgrade.	Facing SW – Cell 9 Subgrade.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 12 (4/26/10 TO 4/30/10)

Cell 9 Crest Pad



Facing N – TWS and BMWC placing the Cell9 Crest Pad discharge line.



Facing N – TWS digging under the Cell9 discharge line to obtain the correct alignment with in place portion of piping installed in the Crest Pad.



Facing S – CQA surveyor (Stratton Surveying) conducting an As-Built survey of the Cell9 discharge piping.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 12 (4/26/10 TO 4/30/10)

Cell 10 Crest Pad



Facing N – TWS backfilling around the Cell 10 Discharge line.



Facing N – TWS using the CAT "hoepack" to compact around the Cell 10 discharge line.



Facing N – TWS Placing lifts to backfill around the Cell 10 discharge line.



Facing E – TWS using the a Payhauler and the Hitachi 200 excavator to place lifts for the Cell 10 Crest Pad.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 12
(4/26/10 TO 4/30/10)

Leachate Transmission Line



Facing N – BMWC welding the 8-in lysimeter piping.



Facing W – TWS backfilling around MH-37.



Facing W – TWS backfilling around MH-36.



Facing NE – 4x8-in HDPE discharge line for Cell 10.



Facing N – TWS utilizing "Jumping Jack" hand compactors to compact lifts over the Cell 10 discharge line.



Facing N – TWS utilizing the pneumatic compactor on the CAT 314 excavator with to compact lifts over the Cell 10 discharge line.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 13
(5/3/10 TO 5/7/10)

Cell 10 Excavation	
	
Facing S – TWS excavating operations soil from Cell 10	Facing N – TWS excavating operations soil from Cell 10
	
Facing N – TWS excavating operations soil from Cell 10	Facing NE – TWS excavating operations soil from Cell 10
	
Facing NW – TWS excavating the final lift from Cell 10.	Facing NE – Completed bulk excavation of ERDF Cell 10..

CQA PHOTOGRAPH LOG WEEK 13
(5/3/10 TO 5/7/10)

Cell 9 Subgrade



05.04.2010 08.19



05.04.2010 08.36

Facing S – TWS Re-grading Cell 9 after the wind storm on 5-3-2010

Facing NE – CQA Surveyors (Stratton Surveying) on site to survey the subgrade for Cell 9.



05.04.2010 08.37



05.05.2010 09.50

Facing N – TWS Re-grading Cell 9 after the wind storm on 5-3-2010

Facing N – TWS using hand shovels to remove windblown sand from the south toe of Cell 9.



05.05.2010 14.57



05.06.2010 12.43

Facing W – TWS moisture conditioning the interior south slope of Cell 9 with the "Ladybug" water truck and a hand held water hose.

Facing SW – TWS pushing the clippings from the Cell 9 subgrade to the NW corner of Cell 9 to be loaded into Payhaulers by the CAT 385 Excavator.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 13 (5/3/10 TO 5/7/10)

Admix Production	
	
Facing E – TWS using the CAT D8 dozer to create more area for Admix storage..	Facing E – TWS using the CAT D8 dozer to create more area for Admix storage..
	
Facing NE – Pug mil set up and stockpiled Admix.	

**CQA PHOTOGRAPH LOG WEEK 13
(5/3/10 TO 5/7/10)**

Cell 9 – Admix Placement



Facing NW – TWS beginning the placement of admix in Cell 9.



Facing N – TWS moisture conditioning the admix as it is placed.



Facing NW – CQA inspecting the first lift of the admix during placement.



Facing NE – TWS compacting the admix with the CAT 825, while the CAT D6 GPS dozer continues to place admix..



Facing S – Cell 9/ Cell 8 Admix tie in.



Facing S – TWS using the CAT 563 smooth drum vibratory roller to seal the admix to prevent moisture loss at the end of the day.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 13
(5/3/10 TO 5/7/10)

Leachate Transmission



Facing N – A truckload of 12-in HDPE pipe arriving on-site..



Facing N – The 4x8-in drain line for Crest Pad 10 installed.



Facing E – A truckload of 10x16-in HDPE and 12-in HDPE piping arriving on-site.



Facing E – TWS has staked the limits of excavation for the leachate transmission line from MH-33 to MH-32.



Facing N – BMWC welding 10x16-in HDPE pipe to be placed between MH-32 and MH-33



Facing Down – BMWC pneumatically testing the outer containment for the 4x8-in HDPE drain line in the Cell 10 Crest Pad.

ERDF CONSTRUCTION CELLS 9-10

**CQA PHOTOGRAPH LOG WEEK 14
(5/10/10 TO 5/14/10)**

Cell 9 Admix Placement (Continued)	
<p>05/10/2010 08:28 AM</p>	<p>05.10.2010 09:22</p>
<p>Facing Down – Subgrade acceptance test. Subgrade contains moisture 4-in below the surface.</p>	<p>Facing NW – TWS using the CAT D6 GPS dozer to push admix up the south embankment of Cell 9.</p>
<p>05.10.2010 09:23</p>	<p>05/10/2010 08:30 AM</p>
<p>Facing S – TWS using the CAT 988 to load the Payhauler trucks with admix.</p>	<p>Facing S - TWS using the CAT D6 GPS dozer to push admix up the south embankment of Cell 9</p>
<p>05/11/2010 07:00 AM</p>	<p>05/11/2010 10:05 AM</p>
<p>Facing S – TWS placing admix along the south slope of Cell 9</p>	<p>Facing SE – TWS using both Payhauler water trucks to moisture condition the admix.</p>

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 14
(5/10/10 TO 5/14/10)

Cell 9 Admix Placement (Continued)



Facing Down – Subgrade acceptance test. Subgrade contains moisture 4-in below the surface.



Facing S – CQA collecting a Shelby tube sample.



Facing S – TWS using the two CAT D6 dozers to push admix down the south embankment near the Cell9/Cell8 tie in.



Facing N – TWS using the CAT 825 compactor to compact the admix near the Cell 9/Cell 8 tie in.



Facing SW – TWS placing admix along the south embankment of Cell 9.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 14 (5/10/10 TO 5/14/10)

Cell 9 Subgrade	
	
Facing S – Cell 9 subgrade partially complete.	Facing S – Cell 9 riser trench needs to be re-excavated after the wind storm on May 3, 2010.
	
Facing N – Cell 9 subgrade.	

CQA PHOTOGRAPH LOG WEEK 14
(5/10/10 TO 5/14/10)

Leachate Transmission Line



Facing SE – BMWC welding HDPE pipe.



Facing W – 10x16-in HDPE between MH-33 and MH-32.



Facing W – 10x16-in HDPE between MH-33 and MH-32 partially cover to control temperature.



Facing Down – 10x16-in pipe penetration into MH-32.



Facing Down – 10x16-in transmission line between MH-33 and MH-32 covered with soil with the joints exposed for inspection.



Facing W – BMWC welding 8x12-in HDPE for the tank penetration from MH-21.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 15
(5/17/10 TO 5/21/10)

Cell 9 Admix Placement	
	
<p>Facing SW – TWS watering and compacting the admix soil placed on the south slope of Cell 9.</p>	<p>Facing N – TWS placing and compacting the admix soil near the southwest corner of Cell 9.</p>
	
<p>Facing S – TWS placing admix soil on the eastern edge of the south slope in Cell 9.</p>	<p>Facing S – TWS placing and compacting admix on the south slope of Cell 9.</p>
	
<p>Facing SW – TWS using two CAT D6 dozers to "clip" the 6th lift to grade on the south slope of Cell 9.</p>	<p>Facing N – TWS static rolling the 6th and final lift on the south slope of Cell 9.</p>



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 15 (5/17/10 TO 5/21/10)

Cell 9 Subgrade	
	
Facing W – TWS preparing the subgrade for admix placement.	Facing S – TWS excavating the lysimeter sump in Cell 9 with the CAT 312 excavator.
	
Facing N – Cell 9 floor subgrade cut to grade and static rolled in preparation for admix placement.	Facing Down – CQA verifying moisture 4-in into the subgrade of Cell 9.
	
Facing W – Cell 9 subgrade cut to grade and static rolled in preparation for admix placement.	Facing N – TWS using the CAT D6 GPS dozer to cut the north embankment of Cell 9 to grade..

CQA PHOTOGRAPH LOG WEEK 15
(5/17/10 TO 5/21/10)

Leachate Transmission Line



05-17-2010 10:51

Facing Down – BMWC releasing water from the outer containment of the 10x16-in pipe between MH-32 and MH-33 after a failed weld.



05-17-2010 15:10

Facing Down – BMWC attempting to locate the failed weld in th 10x16-in HDPE between MH-32 and MH-33.



05-18-2010 13:55

Facing W – BMWC repairing the failed portion of piping between MH-32 and MH-33.



05-20-2010 08:00

Facing Down – 10x16-in HDPE tank penetration coming from MH-39.



05-20-2010 13:00

Facing W – 4x8-in HDPE from tank to pump station.



05-21-2010 07:24

Facing W – TWS backfilling and compacting the trench between MH-32 and MH-33.

ERDF CONSTRUCTION CELLS 9-10

**CQA PHOTOGRAPH LOG WEEK 16
(5/24/10 TO 5/28/10)**

Cell 9 Admix Placement



Facing SW – TWS using the CAT D6 dozer to place admix on the south slope of Cell 9.



Facing NW – TWS using the CAT D6 dozer to place admix on the south slope of Cell 9.



Facing NW – TWS using the CAT D6 dozer to place admix on the floor of Cell 9.



Facing NW – Finished admix surface on the south embankment of Cell 9.



Facing N – TWS using the water truck to moisture condition the admix on the floor of Cell 9.



Facing S – Rainwater running off the admix through the center of Cell 9. TWS built dams to keep the water from reaching the sump.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 16 (5/24/10 TO 5/28/10)

Subgrade	
 <p>05.25.2010 09:07</p>	 <p>05.27.2010 07:26</p>
<p>Facing N - TWS using the water truck to moisten the subgrade on the north embankment of Cell 9.</p>	<p>Facing S - TWS using the CAT 385 excavator and Payhauler trucks to remove the subgrade slipping from the floor of Cell 10.</p>
 <p>05.27.2010 07:26</p>	
<p>Facing SW - GSE placing sand bags around the sump of Cell 9 in preparation for deploying the tertiary liner in the Cell 9 sump.</p>	

**CQA PHOTOGRAPH LOG WEEK 16
(5/24/10 TO 5/28/10)**

Geomembrane Delivery



Facing N – TWS beginning to unload the first delivery of geomembrane.



Facing N – TWS beginning to unload the first delivery of geomembrane in the lay down yard east NE of Cell 10.



Facing NE – Thirty rolls of 60-mil geomembrane have been delivered and accepted by CQA.



Facing E – TWS excavating the liner anchor trench along the south embankment of Cell 9.



Facing SW – GSE moving the 60-mil liner to the south embankment in preparation for liner deployment.



Facing SW – GSE has relocated the 60-mil geomembrane from the unloading area to the south embankment in preparation for liner deployment.

CQA PHOTOGRAPH LOG WEEK 16
(5/24/10 TO 5/28/10)

Leachate Transmission Line



Facing Down – BMWC soap testing the welds on the 4x8-in HDPE discharge line from Tank #3 to MH-22.



Facing Down – Pipe connections, riser and isolation valve inside of MH-21.



Facing W – TWS backfilling around the 4x8-in HDPE discharge line from Tank #3 to MH-22.



Facing N – BMWC welding 10x16-in HDPE double containment piping for leachate transmission from MH-34 to MH-35.



Facing W – TWS using hand compactors (Jumping Jacks) to compact backfill between MH-32 and MH-34.



Facing W – TWS using the CAT 312 with the hoe pack to compact backfill between MH-32 and MH-34.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 17 (6/1/10 TO 6/04/10)

Subgrade	
	
Facing W – TWS trimming the subgrade of the north slope and floor of Cell 10 to grade.	Facing S – Cell 10 following the rain shower from 6/2/10.
	
Facing S – Cell 9 following the rain shower from 6/2/10.	Facing NW – TWS trimming the subgrade of Cell 10 from the center of the cell to the tie-in.

CQA PHOTOGRAPH LOG WEEK 17
(6/1/10 TO 6/04/10)

Admix	
 <p>06.01.2010 06:36</p>	 <p>06.01.2010 06:36</p>
<p>Facing S – Cell 10 morning of 6/1/10, TWS preparing the south slope of Cell 9 for admix placement.</p>	<p>Facing S – Cell 9 morning of 6/1/10, TWS preparing to pump the water out of the Cell 9 sump.</p>
 <p>06.01.2010 10:55</p>	 <p>06.01.2010 10:55</p>
<p>Facing S – TWS utilizing the double smooth drum roller to prepare the admix surface for geomembrane placement.</p>	<p>Facing S – Admix surface prepared for secondary geomembrane placement.</p>
 <p>06.01.2010 15:30</p>	 <p>06.02.2010 09:58</p>
<p>Facing N – ESI exposing the secondary geomembrane tie-in. Subgrade requires additional preparation.</p>	<p>Facing N – Rain showers on 6/2/10 halted admix placement.</p>

CQA PHOTOGRAPH LOG WEEK 17
(6/1/10 TO 6/04/10)

Cell 9 Admix Placement



Facing SW – Rain showers on 6/2/10 eroded the admix surface.



Facing W – TWS continuing to produce admix material.



Facing S – TWS placing admix on the south half of the Cell 9 floor and along the west tie-in.



Facing N – TWS placing admix on the south half of the Cell 9 floor and along the west tie-in.



Facing N – TWS exposing geomembrane on the tie-in to allow ESI enough room to tie-in.



Facing S – TWS removing the non-conforming admix material produced on 6/4/10.

**CQA PHOTOGRAPH LOG WEEK 17
(6/1/10 TO 6/04/10)**

Leachate Transmission Line



Facing SE – BMWC welding the 12-in leachate riser pipe.



Facing W – TWS backfilling and compacting the leachate transmission line between MH-32 and MH-34.



Facing NE – BMWC cutting the weld bead out from inside the 12-in leachate riser pipe.



Facing E – TWS excavating the leachate transmission trench between MH-35 and MH-36.



Facing W – TWS excavating the Cell 9 electrical trench in the north embankment.



Facing W – TWS excavating the Cell 9 electrical trench in the north embankment.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 17
(6/1/10 TO 6/04/10)

Leachate Transmission Line	
<p>Facing Down – TWS placing the 10-in x 16-in leachate transmission line between MH-35 and MH-36.</p>	
Geosynthetic Delivery	
<p>Facing W – ESI preparing to unload geomembrane in the staging area.</p>	<p>Facing W – ESI stockpiling geotextile in the staging area.</p>

CQA PHOTOGRAPH LOG WEEK 18
(6/7/10 TO 6/11/10)

Subgrade



Facing SW – TWS repairing the lysimeter sump in Cell 9



Facing W – TWS surveyor setting cut-fills for the re-grading of the Cell 9 sump.



Facing NW – The re-graded Cell 9 sump.



Facing SW – On Tuesday, a water truck backed into a port-a-john, resulting in a Stop Work for earthwork and admix activities.



Facing W – TWS trimming the subgrade of Cell 10 to grade.



Facing NW – TWS trimming the subgrade of Cell 10 to grade and removing grade trimmings with the excavator.

CQA PHOTOGRAPH LOG WEEK 18
(6/7/10 TO 6/11/10)

Admix Placement



Facing W – TWS preparing to place admix material on the Cell 9 floor.



Facing down – Storm water drainage runnels in the Cell 9 south slope admix subgrade.



Facing S – TWS roughing up the admix subgrade with the CAT D6 dozer in order to remove unacceptable run-off runnels.



Facing SW – TWS removed non-conforming admix in the southwest corner and replaced with fresh admix and additional bentonite.



Facing N – The subgrade of Cell 9 prior to geomembrane placement. Admix placement on-going in Cell 9.



Facing SE – Admix placement on-going in Cell 9.

CQA PHOTOGRAPH LOG WEEK 18
(6/7/10 TO 6/11/10)

Admix Placement



Facing SE – TWS placing admix at the top of the south slope of Cell 9.



Facing E – TWS removing runnels and other irregularities with hand tools prior to secondary geomembrane deployment.



Facing NW – TWS compacting admix on the floor of Cell 9 with the CAT 825 compactor.



Facing S – Admix placement in Cell 9.

CQA PHOTOGRAPH LOG WEEK 18
(6/7/10 TO 6/11/10)

Geosynthetics	
 <p>06.07.2010 13:19</p>	 <p>06.07.2010 14:06</p>
<p>Facing SW – ESI preparing to deploy secondary geomembrane in Cell 9.</p>	<p>Facing E – The forklift began to tip over during deployment of the secondary geomembrane. The roll was set in the anchor trench.</p>
 <p>06.07.2010 14:36</p>	 <p>06.08.2010 07:07</p>
<p>Facing W – All liner activities were halted until the picking incident could be assessed.</p>	<p>Facing NW – ESI preparing the geomembrane tie-in along Cell 7.</p>
 <p>06.10.2010 07:43</p>	 <p>06.10.2010 07:59</p>
<p>Facing S – ESI deploying secondary geomembrane down the Cell 9 south embankment.</p>	<p>Facing S – ESI attaching the secondary geomembrane to the Kubota ATV. The Kubota ATV pulled the liner out over the floor.</p>

CQA PHOTOGRAPH LOG WEEK 18
(6/7/10 TO 6/11/10)

Geosynthetics	
 <p>06.10.2010 09:39</p>	 <p>06.10.2010 10:20</p>
<p>ESI completing trial welds for welding the secondary geomembrane.</p>	<p>Facing NW – ESI fusion welding the secondary geomembrane in Cell 9.</p>
 <p>06.11.2010 07:01</p>	 <p>06.11.2010 09:36</p>
<p>Facing S – ESI pulling back the secondary geomembrane tie-in on the south slope of Cell 9.</p>	<p>Facing SW – ESI cleaning the secondary geomembrane tie-in on the south slope of Cell 9.</p>



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 18 (6/7/10 TO 6/11/10)

Leachate Transmission Line	
	
Facing E – Electrical conduit placement between Crest Pads 9 and 10.	Facing W – Electrical conduit placement from Crest Pad 9 to Crest Pad 8.
	
Facing E – TWS compacting the backfill over the leachate transmission line between MH-35 and MH-36.	

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 19
(6/14/10 TO 6/18/10)

Subgrade	
<p style="text-align: right; color: orange;">06.15.2010 14:07</p>	<p style="text-align: right; color: orange;">06.18.2010 06:59</p>
<p>Facing SW – TWS using the CAT D6 to cut the Cell 10 Lysimeter sump to grade.</p>	<p>Facing NW – TWS moisture conditioning the Cell 9 subgrade on the north embankment prior to admix placement.</p>



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 19 (6/14/10 TO 6/18/10)

Admix Placement



Facing S – TWS placing admix on the floor of Cell 9.



Facing SW – TWS placing admix on the floor of Cell 9.



Facing N – TWS placing admix on the north slope of Cell 9.



Facing N – TWS preparing to place admix in the Cell 9 Lysimeter sump.

CQA PHOTOGRAPH LOG WEEK 19
(6/14/10 TO 6/18/10)

Geosynthetics



Facing S – ESI seaming secondary geomembrane together in Cell 9.



Facing N – ESI using the Kabota RTV to deploy secondary geomembrane on the south half of Cell 9.



Facing N – Secondary geomembrane has been placed and welded on the south half of Cell 9



Facing NE – Secondary geomembrane has been placed and welded on the south half of Cell 9



Facing S – ESI utilizing sand bags to weigh down the secondary geomembrane prior to seaming the panels..



Facing Down – ESI using pressure gauges to perform the non-destructive air test on fusion welded seams.

**CQA PHOTOGRAPH LOG WEEK 19
(6/14/10 TO 6/18/10)**

Geosynthetics	
<p>06.17.2010 08.36</p>	<p>06.17.2010 16.39</p>
<p>Facing SW – ESI cleaning the underside of the secondary liner prior to welding.</p>	<p>Facing S – ESI welding secondary geomembrane with a DEMTECH pro-wedge fusion welder.</p>
<p>06.18.2010 07.05</p>	<p>06.18.2010 14.30</p>
<p>Facing W – ESI using the Kabota RTV to deploy secondary geomembrane on the south half of Cell 9.</p>	<p>Facing S – ESI preparing to weld the secondary geomembrane to the tie in along the floor of Cell 9.</p>
<p>06.18.2010 14.38</p>	
<p>Facing S – ESI preparing to weld the secondary geomembrane to the tie in along the floor of Cell 9.</p>	

CQA PHOTOGRAPH LOG WEEK 19
(6/14/10 TO 6/18/10)

Geosynthetics



Facing SE – ESI deploying tertiary liner in the Cell 9 lysimeter sump.



Facing N – ESI placing tertiary liner in the Cell 9 lysimeter sump.



Facing S – ESI extrusion welding the tertiary liner to the lysimeter riser pipe flange.



Facing S – ESI performing vacuum testing on all extrusion welds in the tertiary liner system.



Facing NW – Tertiary liner in the Cell 9 lysimeter sump is complete.



Facing N – ESI has completed placing the geotextile in the Cell 9 lysimeter sump.

CQA PHOTOGRAPH LOG WEEK 19
(6/14/10 TO 6/18/10)

Geosynthetics	
 <p>06.17.2010 15:06</p>	 <p>06.17.2010 15:51</p>
<p>Facing NE – TWS beginning to place drainage gravel in the Cell 9 lysimeter sump.</p>	<p>Facing SE – TWS placing drainage gravel in the Cell 9 lysimeter sump.</p>
 <p>06.18.2010 08:20</p>	 <p>06.18.2010 08:28</p>
<p>Facing NE – ESI wrapping the Cell 9 lysimeter pipe in geotextile.</p>	<p>Facing NE – ESI wrapping the Cell 9 lysimeter pipe in geotextile.</p>
 <p>06.18.2010 09:10</p>	
<p>Facing N – TWS placing drainage gravel in the Cell 9 lysimeter sump.</p>	



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 19 (6/14/10 TO 6/18/10)

Leachate Transmission Line	
	
Facing E – TWS placing concrete in the electrical duct bank along the north embankment of Cell 9 and 10.	Facing E – TWS placing concrete in the electrical duct bank along the north embankment of Cell 9 and 10.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 20 (6/21/10 TO 6/25/10)

Subgrade



Facing SW – TWS moisture conditioning the Cell 9 subgrade prior to admix placement near the north toe of Cell 9.



Facing N – TWS using the Payhauler water truck to moisture condition the Cell 10 subgrade.



Facing NE – TWS using the Payhauler water truck to moisture condition the Cell 10 subgrade.



Facing NE – TWS using the Payhauler water truck to moisture condition the Cell 10 subgrade.

CQA PHOTOGRAPH LOG WEEK 20
(6/21/10 TO 6/25/10)

Admix Placement



Facing N – TWS using the international water truck to moisture condition the admix on the north embankment.



Facing N – TWS placing the first lift of admix on the north embankment of Cell 9.



Facing SW – TWS beginning to place admix in the Cell 9 lysimeter sump.



Facing N – TWS re-rolling grid C1 on the north embankment after failing density tests.



Facing W – TWS has partially completed the liner anchor trench along the north embankment on the west side of Cell 9.



Facing N – TWS placing lifts on the north embankment of Cell 9 using two CAT D6 GPS dozers.

ERDF CONSTRUCTION CELLS 9-10

**CQA PHOTOGRAPH LOG WEEK 20
(6/21/10 TO 6/25/10)**

Geosynthetics



Facing S – Secondary liner activities on hold due to unacceptable subgrade in the trough of Cell 9.



Facing N – Secondary liner placement in Cell 9.



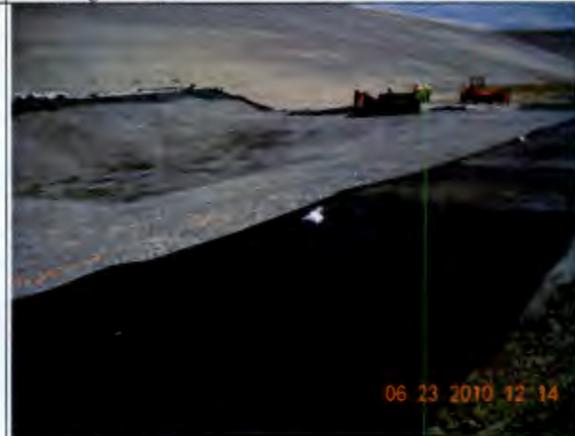
Facing Down – ESI testing trial welds prior to performing seaming activities.



Facing Down – ESI welder performing welder maintenance prior to conducting trail welds.



Facing E – ESI rolling geocomposite down the south embankment of Cell 9.



Facing NE – ESI beginning to place 16-oz. geotextile over the drainage gravel in the Cell 9 lysimeter sump.

CQA PHOTOGRAPH LOG WEEK 20
(6/21/10 TO 6/25/10)

Geosynthetics



Facing SW – ESI employees sewing the 16-on geotextile in the Cell 9 lysimeter sump.



Facing W – ESI employees sewing the 16-on geotextile in the Cell 9 lysimeter sump.



Facing S – Geocomposite deployment on the south embankment of Cell 9.



Facing W – Due to heat a large wrinkle formed near the south toe of Cell 9. ESI was instructed to cut the liner, remove the wrinkle and patch the area.



Facing W – ESI welding a patch in the south toe of Cell 9 that was used to remove a large wrinkle.



Facing N – Geocomposite deployment in Cell 0.

CQA PHOTOGRAPH LOG WEEK 20
(6/21/10 TO 6/25/10)

Lysimeter Sump



Facing W – TWS has completed lining the Cell 9 lysimeter sump with drainage gravel.



Facing W – TWS is removing excess gravel from the lysimeter sump after gravel placement was complete.



Facing SW – TWS is removing excess gravel from the lysimeter sump after gravel placement was complete.



Facing SW – TWS completing final grading of the Cell 9 lysimeter sump.



Facing S – TWS placing admix over the Cell 9 lysimeter sump.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 21 (6/28/10 TO 7/2/10)

Subgrade



Facing S – TWS using the “Ladybug” water truck to moisture condition the subgrade on the south slope of Cell 10 prior.



Facing SE – TWS laborer moisture conditioning the south interior embankment of Cell 10 using a water hose.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 21
(6/28/10 TO 7/2/10)

Admix Placement



Facing NE – TWS placing admix on the north slope of Cell 9 east of the Cell 9 riser trench.



Facing SW – TWS placing and compacting admix on the north slope of Cell 9 east of the Cell 9 riser trench.



Facing E – TWS moisture conditioning the admix east of the Cell 9 sump.



Facing NE – TWS compacting the admix south of the Cell 9 sump.



Facing NE – TWS moisture conditioning and compacting the admix south of the Cell 9 sump.



Facing SE – TWS compacting the first lift of admix on the south embankment of Cell 10.

CQA PHOTOGRAPH LOG WEEK 21
(6/28/10 TO 7/2/10)

Geosynthetics



Facing W – A large wrinkle has developed at the south toe of Cell 9. ESI will repair the wrinkle prior to covering with geocomposite.



Facing E – ESI repairing a large wrinkle at the south toe of Cell 9.



Facing S – ESI preparing to place secondary liner on the north slope of Cell 9 along the existing tie-in.



Facing N – ESI placing secondary liner on the north slope of Cell 9 along the existing tie-in.



Facing S – ESI using a rub sheet to deploy primary liner on the south slope of Cell 9.



Facing SW – Secondary liner, geocomposite and primary liner have been deployed on the south slope.

CQA PHOTOGRAPH LOG WEEK 21
(6/28/10 TO 7/2/10)

Geosynthetics



Facing SW – ESI deploying primary liner on the south slope of Cell 9.



Facing N – ESI welding primary liner on the south slope of Cell 9.



Facing Down – End-to-End seams of geocomposite zip tied together.



Facing Down – ESI capping End-to-End seam with geotextile to seal out sand or debris.



Facing N – ESI preparing to weld the Cell 9 tie-in along the north slope and toe.



Facing N – ESI making primary repairs on the south half of the floor in Cell 9.

CQA PHOTOGRAPH LOG WEEK 22
(7/6/10 TO 7/9/10)

Subgrade	
	
<p>Facing SE – TWS watering the subgrade on the south embankment prior to admix placement.</p>	<p>Facing S – Overview of Cell 10 subgrade and admix placement.</p>
	
<p>Facing S – TWS watering the subgrade on the south embankment prior to admix placement.</p>	<p>Facing N – TWS loading Cell 10 floor clippings into Payhauler trucks to be transported to the excavation stockpile.</p>

CQA PHOTOGRAPH LOG WEEK 22
(7/6/10 TO 7/9/10)

Admix Placement



Facing SW – Weekend rainstorms caused runoff to accumulate in the Cell 9 sump.



Facing NE – Saturated admix near the Cell 9 sump from weekend storms.



Facing S – TWS watering the admix with the International water truck.



Facing SE – TWS using the CAT D6 GPS dozer to place admix on the south slope of Cell 10.



Facing SW – TWS placing and compacting admix on the south slope of Cell 10.



Facing NW – TWS using a laborer and a water hose to moisture condition the admix on the north slope on Cell 9.

CQA PHOTOGRAPH LOG WEEK 22
(7/6/10 TO 7/9/10)

Geosynthetics



Facing S – ESI placing secondary geocomposite on the south slope of Cell 9.



Facing N – ESI using a sewing machine to sew the fabric on the secondary geocomposite after all ties have been completed and inspected.



Facing E – ESI welding the secondary liner to the primary liner in the south anchor trench.



Facing E – ESI rolling secondary geocomposite across Cell 9 in preparation for placement.



Facing N – ESI deploying secondary geocomposite on the south half of the floor in Cell 9.



Facing SW – Overall view of liner and geocomposite in Cell 9.

CQA PHOTOGRAPH LOG WEEK 22
(7/6/10 TO 7/9/10)

Geosynthetics	
 <p>07.09.2010 06:55</p>	 <p>07.09.2010 12:59</p>
<p>Facing N – ESI working on the south half of the secondary geocomposite tie-in for Cell 9.</p>	<p>Facing Down – ESI sealing the existing secondary drain rock between the existing 16 oz. geotextile.</p>
 <p>07.09.2010 09:46</p>	 <p>07.09.2010 12:45</p>
<p>Facing N – ESI tying the secondary geocomposite tie in along the south embankment of Cell 9.</p>	<p>Facing S – ESI folding the existing 16-oz. geotextile around the existing secondary drain rock to construct the tie-in.</p>

CQA PHOTOGRAPH LOG WEEK 22
(7/6/10 TO 7/9/10)

Drainage Rock Production



Facing NE – TWS rock plant in production.



Facing NE – TWS rock plant in production.

Electrical Bank Concrete Fill



Facing N – Backfilling Cell 10 electrical bank with concrete.



Facing NE – Intermountain Testing testing electrical bank concrete.

Cell 9 Riser Trench Excavation



Facing N – TWS excavating Cell 9 riser trench.



Facing N – TWS excavating Cell 9 riser trench.

CQA PHOTOGRAPH LOG WEEK 23
(7/12/10 TO 7/16/10)

Cell 10 Excavation	
<p>Facing NW – TWS excavating the Cell 10 lysimeter trench.</p>	<p>Facing S – TWS backfilling the Cell 10 lysimeter</p>
<p>Facing S – TWS compacting backfill over the Cell 10 lysimeter trench.</p>	

CQA PHOTOGRAPH LOG WEEK 23
(7/12/10 TO 7/16/10)

Admix Placement



Facing SW – TWS placing and compacting admix on the south berm of Cell 10.



Facing SW – TWS utilizing the double smooth drum roller to finish the admix surface of the Cell 9 sump.



Facing N – The Cell 9 admix sump and side slope riser trench.



Facing S – TWS placing and compacting admix on the south berm of Cell 10.



Facing NW – TWS placing and compacting admix on the south floor of Cell 10.



Facing NE – The pugmill continuing to stockpile admix material.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 23 (7/12/10 TO 7/16/10)

Admix Placement Continued	
	
<p>Facing N – TWS placing the first lift of admix on the north berm of Cell 10.</p>	<p>Facing SE – TWS compacting admix on the south floor of Cell 9 while the smooth drum roller prepares the subgrade for admix placement.</p>
<p>Note: No other admix activities occurred this week due to a stop work on all activities in the Cell construction area.</p>	

CQA PHOTOGRAPH LOG WEEK 23
(7/12/10 TO 7/16/10)

Cell 9 Anchor Trench



Facing W – The anchor trench interior side slope was unacceptable for liner deployment.



Facing W – TWS utilized a CAT excavator to correct the interior side slope of the anchor trench.



Facing W – The finished surface of the interior side slope of the anchor trench.



Facing E – TWS overbuilt the admix shoulder by a couple of feet.



Facing E – TWS excavating the excess admix with the CAT 312 excavator.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 23
(7/12/10 TO 7/16/10)

Cell 9 Secondary Riser	
<p>07.12.2010 09:35</p>	<p>07.15.2010 07:10</p>
<p>Facing S – TWS constructing the secondary drainage gravel/secondary geocomposite tie-in for Cell 9.</p>	<p>Facing SW – ESI constructing the secondary composite tie-in on the Cell 9 south slope.</p>
Drainage Gravel	
<p>07/13/2010 08:52 AM</p>	<p>07/16/2010 10:25 AM</p>
<p>Facing SW – TWS stockpiling Type A drainage gravel southeast of Cell 10.</p>	<p>Facing NE – American Rock stockpiling Type C drainage gravel north of Cell 10.</p>

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 23
(7/12/10 TO 7/16/10)

Cell 9 Geosynthetics	
	
Facing SW – Geosynthetic placement in Cell 9.	Facing SW – ESI deploying secondary geomembrane in Cell 9.
	
Facing S – ESI welding the deployed secondary geomembrane in Cell 9.	Facing S – ESI deploying the secondary geomembrane through the Cell 9 sump.
	
Facing S – ESI welding the secondary geomembrane in the Cell 9 sump.	Note: No other geosynthetic activities occurred this week due to a stop work on all activities in the Cell construction area.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 23
(7/12/10 TO 7/16/10)

Leachate Transmission Line	
<p>07/13/2010 09:44 AM</p>	<p>07-15-2010 08:21</p>
<p>Facing NE – BMWC installing valves in MH-38</p>	<p>Facing SW – TWS constructing the Cell 10 operations access ramp with the CAT D6 dozer.</p>
<p>07/16/2010 10:24 AM</p>	<p>07-15-2010 08:22</p>
<p>Facing N – TWS backfilling the leachate transmission pipeline between the existing pipeline and MH-21.</p>	<p>Facing N – TWS excavated a trench from MH-33 to the north berm for the Cell 10 discharge drain line to be utilizing during ATP testing.</p>
<p>07-15-2010 09:15</p>	
<p>Facing SW – TWS excavating and grading the trench for the Cell 9 discharge drain line.</p>	

CQA PHOTOGRAPH LOG WEEK 24
(7/19/10 TO 7/23/10)

Cell 10 Excavation	
 <p>07.21.2010 17:45</p>	 <p>07.20.2010 08:27</p>
 <p>07.21.2010 17:40</p>	 <p>07.20.2010 13:40</p>

CQA PHOTOGRAPH LOG WEEK 24
(7/19/10 TO 7/23/10)

Admix Placement	
	
<p>Facing S – TWS placing and compacting admix on the south half of Cell 10.</p>	<p>Facing SW – TWS placing and compacting admix on the south half of Cell 10.</p>
	
<p>Facing W – TWS compacting admix in the northwest corner of the Cell 10 floor.</p>	<p>Facing SW – TWS placing and compacting admix on the south half of Cell 10.</p>
	
<p>Facing SE – TWS preparing the south embankment for geomembrane deployment.</p>	<p>Facing SE – TWS grading the admix on the south slope of Cell 10 with a D6 dozer, while compacting the admix on the Cell 10 floor.</p>

**CQA PHOTOGRAPH LOG WEEK 24
(7/19/10 TO 7/23/10)**

Admix Placement Continued



Facing SW – TWS placing and compacting admix on the south half of Cell 10.



Facing SW – TWS compacting admix in the northwest corner of the Cell 10 floor.



Facing N – TWS placing and compacting admix on the north slope and floor of Cell 10, while a water truck prepares the subgrade for admix placement.



Facing S – TWS compacting admix on the north slope and floor of Cell 10.



Facing W – TWS compacting admix in the northwest corner of the Cell 10 floor.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 24 (7/19/10 TO 7/23/10)

Cell 10 Lysimeter	
	
Facing NE – TWS excavating the lysimeter trench in Cell 10.	Facing NE – TWS excavating the riser trench in the Cell 10 trench subgrade.
	
Facing W – TWS excavating the lysimeter sump in Cell 10 with a CAT D6 dozer.	Facing SE – The excavated lysimeter sump and side slope riser in Cell 10.

CQA PHOTOGRAPH LOG WEEK 24
(7/19/10 TO 7/23/10)

Cell 9 Secondary Riser	
 <p>07.21.2010 12:56</p>	 <p>07/21/2010 01:07 PM</p>
 <p>07.21.2010 13:54</p>	 <p>07.22.2010 10:59</p>
 <p>07.22.2010 12:58</p>	 <p>07.23.2010 07:13</p>
<p>Facing SW – TWS and BMWC placing the secondary riser pipes into Cell 9.</p>	<p>Facing NE – TWS walking the secondary riser pipe down the riser trench with an excavator and a spotter.</p>
<p>Facing NE – TWS walking the second secondary riser pipe down the riser trench with an excavator and spotter.</p>	<p>Facing NW – TWS backfilling the Cell 9 secondary riser pipes with two (2) excavators.</p>
<p>Facing NW – TWS backfilling the Cell 9 secondary riser pipes with two (2) excavators.</p>	<p>Facing NW – TWS grading the Cell 9 secondary riser pipe backfill with the aid of a spotter.</p>

**CQA PHOTOGRAPH LOG WEEK 24
(7/19/10 TO 7/23/10)**

Cell 9 Geosynthetics	
 <p>07/19/2010 12:17 PM</p>	 <p>07.19.2010 14:58</p>
<p>Facing N – During the stop work initiated last week, a panel of secondary geomembrane was folded in the wind.</p>	<p>Facing W – ESI placing primary geomembrane over secondary geocomposite on the floor of Cell 9.</p>
 <p>07/20/2010 08:21 AM</p>	 <p>07/20/2010 08:44 AM</p>
<p>Facing NW – ESI pulling primary geomembrane across Cell 9 with a track bobcat.</p>	<p>Facing NW – ESI welding the primary geomembrane in Cell 9.</p>
 <p>07/20/2010 02:42 PM</p>	 <p>07/21/2010 08:44 AM</p>
<p>Facing W – ESI repairing the secondary geomembrane in the Cell 9 sump.</p>	<p>Facing NE – ESI deploying 16 oz. geotextile in the Cell 10 lysimeter sump.</p>

CQA PHOTOGRAPH LOG WEEK 24
(7/19/10 TO 7/23/10)

Cell 9 Geosynthetics Continued



Facing SE – ESI deploying sec. geocomposite in the Cell 9 riser trench, while a technician repairs a hole in the sec. geomembrane.



Facing S – ESI deploying secondary geocomposite in the Cell 9 sump.



Facing SE – ESI deploying secondary geocomposite on the floor of Cell 9.



Facing SE – ESI deploying secondary geocomposite on the floor of Cell 9.



Facing S – The secondary geocomposite/secondary drainage gravel tie-in.



Facing S – ESI encapsulating the secondary drainage gravel in the Cell 9 tie-in.

CQA PHOTOGRAPH LOG WEEK 24
(7/19/10 TO 7/23/10)

Cell 9 Geosynthetics Continued	
 <p>07/23/2010 12:00 PM</p>	 <p>07/23/2010 01:32 PM</p>
 <p>07/23/2010 02:32 PM</p>	 <p>07/23/2010 02:51 PM</p>
 <p>07/23/2010 03:16 PM</p>	 <p>07/23/2010 03:42 PM</p>
<p>Facing SE - ESI deploying primary geomembrane in Cell 9 with the aid of the track bobcat.</p>	<p>Facing S - ESI constructing the Cell 9 secondary composite tie-in.</p>
<p>Facing N - ESI joining the secondary geocomposite on the Cell 9 floor west of the Cell 9 tie-in.</p>	<p>Facing N - ESI leistering geotextile flaps over the butt seams as per specifications.</p>
<p>Facing E - ESI welding the deployed primary geomembrane in Cell 9.</p>	<p>Facing W - ESI deploying secondary geocomposite on the north half of Cell 9.</p>

CQA PHOTOGRAPH LOG WEEK 25
(7/26/10 TO 7/30/10)

Admix Placement	
	
<p>Facing N – TWS preparing the north slope for geomembrane placement.</p>	<p>Facing NE – TWS moisture conditioning the admix prior to geomembrane placement.</p>
	
<p>Facing SW – TWS compacting admix on the south half of Cell 10, while hauling admix to the north half of Cell 10.</p>	<p>Facing SW – TWS compacting admix on the north half of Cell 10, while a dozer trims the admix on the north berm to grade.</p>
	
<p>Facing N – TWS moisture conditioning the admix on the north berm.</p>	<p>Facing W – TWS excavating the anchor trench on the south berm of Cell 10.</p>

CQA PHOTOGRAPH LOG WEEK 25
(7/26/10 TO 7/30/10)

Admix Placement Continued



Facing N – TWS trimming the south half of Cell 10 to grade while placing admix on the north half.



Facing SW – TWS finishing admix surface on the south berm with a smooth drum roller, while compacting admix on the floor.



Facing SE – TWS placing and compacting admix on the north half of Cell 10.



Facing NE – TWS spreading and compacting admix on the north berm, while moisture conditioning the subgrade of the north berm.



Facing NW – TWS moisture conditioning and compacting the admix on the south half the Cell 10 floor.



Facing W – TWS spreading and compacting admix on the north berm of Cell 10.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 25 (7/26/10 TO 7/30/10)

Bentonite Delivery	
	
TWS off-loading bentonite from railcars in the railroad siding.	TWS utilizing an auger to move the bentonite from the railcar to the blow truck.
	
The certified scale utilized to calculate the amount of bentonite hauled to site.	

CQA PHOTOGRAPH LOG WEEK 25
(7/26/10 TO 7/30/10)

Cell 10 Lysimeter Sump	
 <p>07-27-2010 09:08</p>	 <p>07-27-2010 09:08</p>
<p>Facing NE – BMWC exposing the Cell 10 lysimeter pipe.</p>	<p>Facing NW – BMWC installing the bootless pipe penetration in the Cell 10 lysimeter sump.</p>
 <p>07/28/2010 05:53 AM</p>	 <p>07/28/2010 06:38 AM</p>
<p>Facing NW – ESI installing the tertiary liner in the Cell 10 lysimeter sump.</p>	<p>Facing NW – ESI installing the tertiary liner in the Cell 10 lysimeter sump.</p>
 <p>07-29-2010 05:47</p>	 <p>07-29-2010 07:51</p>
<p>Facing N – The installed tertiary geomembrane. Stormwater runoff gathered in the sump after an early morning storm.</p>	<p>Facing NE – ESI deploying 16 oz. geotextile in the Cell 10 lysimeter sump.</p>

CQA PHOTOGRAPH LOG WEEK 25
(7/26/10 TO 7/30/10)

Cell 9 Secondary Sump	
 <p>07/28/2010 08:48 AM</p>	 <p>07/28/2010 06:49 AM</p>
<p>Facing SW – TWS placing Type B rock into the Cell 9 sump.</p>	<p>Facing SW – TWS placing Type B rock into the Cell 9 secondary sump.</p>
 <p>07/28/2010 07:10 AM</p>	 <p>07/28/2010 07:57 AM</p>
<p>Facing S – TWS spreading Type B in the Cell 9 secondary sump with the CAT 312 excavator.</p>	<p>Facing SE – TWS removing the ruts from the drainage gravel haul road to the Cell 9 secondary sump.</p>
 <p>07/28/2010 09:18 AM</p>	 <p>07/28/2010 08:41 AM</p>
<p>Facing NW – ESI deploying 16 oz. geotextile in the Cell 9 riser trench.</p>	<p>Facing S – TWS utilizing hand tools to remove the ruts near the Cell 9 sump.</p>

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 25
(7/26/10 TO 7/30/10)

Cell 9 Secondary Sump Continued



Facing SE - TWS moisture conditioning the reworked area with a water truck.



Facing S- TWS over moisture conditioned the admix near the Cell 9 sump.



Facing S - TWS utilizing had tools to spread out the saturated admix material.



Facing S - TWS compacting the drainage gravel haul road.



Facing N - TWS placing fresh admix over the haul road.



Facing NE - TWS spreading and compacting lift 6 over the Cell 9 gravel haul road to bring the admix surface to grade.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 25 (7/26/10 TO 7/30/10)

Cell 9 Secondary Tie-in	
	
Facing W – ESI deploying secondary geocomposite in Cell 9.	Facing N – TWS constructing the Cell 9 secondary drainage gravel tie-in.
	
Facing SW – ESI deploying secondary geocomposite in Cell 9.	

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 25
(7/26/10 TO 7/30/10)

Geosynthetic Placement	
<p>Facing S – ESI deploying secondary geomembrane on the south slope and floor of Cell 10.</p>	<p>Facing SE – ESI deploying secondary geomembrane on the north slope and floor of Cell 9 east of the sump.</p>
<p>Facing NE – ESI utilizing a track bobcat to deploy secondary geomembrane in Cell 9.</p>	<p>Facing SW – ESI left a hole in the secondary geomembrane due to a saturated admix subgrade next to the Cell 9 sump.</p>

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 26
(8/02/10 TO 8/07/10)

Admix Placement



Facing NW – TWS placing admix material on the north berm on Cell 10.



Facing S – TWS grading the 3:1 admix termination with a CAT 325 excavator.



Facing NW – TWS moisture conditioning and compacting admix on the north berm of Cell 10.



Facing N – TWS compacting admix on the north berm, while a second dozer is preparing CQA test locations.



Facing SE – TWS compacting admix on the floor of Cell 10.



Facing S – TWS placing and spreading admix on the floor of Cell 10.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 26
(8/02/10 TO 8/07/10)

Admix Placement Continued



Facing N – TWS grading the north berm and spreading grade trimming as the next lift on the Cell 10 floor.



Facing E – TWS compacting admix on the south half of Cell 10.



Facing NE – TWS overbuilt the east termination of the admix. TWS utilized a CAT dozer to trim back the excess admix material.



Facing S – CQA verified that no subgrade was placed into the admix during trimming operations.



Facing N – TWS placing admix material onto the floor of Cell 10.



Facing N – TWS placing admix over the leading edge of the tertiary geomembrane in the Cell 10 lysimeter sump.

CQA PHOTOGRAPH LOG WEEK 26
(8/02/10 TO 8/07/10)

Admix Placement Continued	
 <p>08.06.2010 11:18</p>	 <p>08.06.2010 07:08</p>
<p>Facing SW – TWS grading the admix on the Cell 10 floor, while admix material is placed south of the Cell 10 sump.</p>	<p>Facing N – TWS moisture conditioning the subgrade of the Cell 10 slope prior to admix placement.</p>
 <p>08.06.2010 09:30</p>	 <p>08.07.2010 10:45</p>
<p>Facing NW – TWS moisture conditioning the Cell 10 slope, while admix is being placed and compacted on the slope.</p>	<p>Facing SE – TWS placing admix on the floor of Cell 10.</p>
 <p>08.07.2010 10:45</p>	
<p>Facing E – TWS compacting admix on the north slope of Cell 10.</p>	

CQA PHOTOGRAPH LOG WEEK 26
(8/02/10 TO 8/07/10)

Cell 10 Lysimeter Sump	
 <p>08.02.2010 08:00</p>	 <p>08.02.2010 07:08</p>
<p>Facing W – TWS grading the Type C drainage gravel in the Cell 10 lysimeter sump.</p>	<p>Facing NE - TWS spreading and grading the Type C drainage gravel in the Cell 10 lysimeter sump.</p>
 <p>08.04.2010 08:49</p>	 <p>08.05.2010 09:53</p>
<p>Facing S – TWS grading the Type C drainage gravel in the Cell 10 lysimeter sump.</p>	<p>Facing NW – ESI deploying and welding 16 oz geotextile over the Type C drainage gravel in the Cell 10 lysimeter sump.</p>

CQA PHOTOGRAPH LOG WEEK 26
(8/02/10 TO 8/07/10)

Geosynthetic Placement	
 <p>08/02/2010 12:08 PM</p>	 <p>08.02.2010 14:30</p>
<p>Facing S – ESI deploying secondary geomembrane on the south slope and floor of Cell 10.</p>	<p>Facing SE – ESI deploying secondary geomembrane on the south slope and floor of Cell 10.</p>
 <p>08.02.2010 16:25</p>	 <p>08.02.2010 16:27</p>
<p>Facing NW – ESI weighing down the secondary geomembrane in Cell 10 with geocomposite rolls.</p>	<p>Facing N – Extents of geosynthetic placement in Cell 10 (continuation of picture to the left)</p>
 <p>08.03.2010 06:38</p>	 <p>08.03.2010 09:13</p>
<p>Facing S – ESI deploying secondary geomembrane on the south berm of Cell 10 with the aid of a track bobcat.</p>	<p>Facing SE – ESI welding secondary geomembrane on the south slope and floor of Cell 10.</p>

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 26
(8/02/10 TO 8/07/10)

Geosynthetic Placement Continued	
<p style="text-align: right; color: orange;">08/03/2010 14:11</p>	<p style="text-align: right; color: yellow;">08/04/2010 06:57 AM</p>
<p>Facing S – ESI deploying secondary geomembrane near the Cell 10 termination on the south slope.</p>	<p>Facing S – The geotextile on the geocomposite reached its exposure limit. ESI is folding the composite over to prolong the exposure date.</p>
Ancillary Work	
<p style="text-align: right; color: orange;">08/05/2010 15:02</p>	<p style="text-align: right; color: orange;">08/05/2010 09:07</p>
<p>Facing E – TWS excavating an area of the subgrade near the trench access ramp that was left higher than design grade.</p>	<p>Facing E – TWS excavating the anchor trench on the north slope of Cell 10.</p>

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 26
(8/02/10 TO 8/07/10)

Cell 9 Secondary Tie-in	
 <p>08-02-2010 14:12</p>	 <p>08-02-2010 14:13</p>
Facing S – The Cell 9 secondary tie-in.	Facing N – The Cell 9 secondary tie-in.
 <p>08-04-2010 07:02</p>	 <p>08/04/2010 06:16 AM</p>
Facing S – ESI leistering the 16 oz. geotextile over the secondary drainage gravel on the Cell 9 secondary tie-in.	Facing S – ESI leistering the 16 oz. geotextile over the secondary drainage gravel on the Cell 9 secondary tie-in.
 <p>08-04-2010 08:04</p>	
Facing S – ESI placed and welded the primary geomembrane over the secondary geotextile/geocomposite on the Cell 9 tie-in.	

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 27
(8/9/10 TO 8/13/10)

Admix Placement Continued



08.10.2010 08:08



08.10.2010 09:05

Facing SW – TWS finishing the admix surface in Cell 10, while the water truck moisture conditions the admix surface

Facing W – TWS utilizing an excavator to grade the admix side slope riser trench.



08.10.2010 12:06



08.10.2010 17:39

Facing S – TWS moisture conditioning and compacting the admix on the north half of Cell 10.

Facing E – TWS compacting the admix in the Cell 10 sump with a CAT 825 sheepfoot compactor.



08.11.2010 12:59



08.11.2010 12:59

Facing W – TWS compacting and trimming the admix to grade on the north half of Cell 10.

Facing W – TWS utilizing a smooth drum roller to prepare the admix surface for geomembrane placement.

**CQA PHOTOGRAPH LOG WEEK 27
(8/9/10 TO 8/13/10)**

Admix Placement Continued



Facing N – TWS compacting the admix on the right and trimming the final lift to grade on the left.



Facing SW – TWS compacting, trimming, and finishing the admix on the north half of Cell 10.



Facing N – TWS utilizing the smooth drum roller to prepare the admix surface, while a CAT excavator grades the Cell 10 riser trench.



Facing W – TWS utilizing the double smooth drum roller to finish the admix surface, while the CAT excavator grades the Cell 10 sump.



Facing N – The CAT excavator continuing to grade the admix side slope riser trench in Cell 10.

CQA PHOTOGRAPH LOG WEEK 27
(8/9/10 TO 8/13/10)

Geosynthetic Installation



Facing NW – Geotextile deployment in Cell 9.



Facing W – Due to exposure limits, ESI folded the geocomposite over, exposing the underside, and increasing the 14 day expose limit.



Facing SE – ESI deploying geotextile in Cell 9.



Facing SW – The extents of the geotextile deployment in Cell 9.



Facing E – ESI preparing to deploy geomembrane in Cell 9, but high winds halted deployment.

CQA PHOTOGRAPH LOG WEEK 27
(8/9/10 TO 8/13/10)

Cell 9 Geosynthetics Continued



08.11.2010 06:19

Facing NW – During installation of the primary geomembrane, CQA noticed a rut in the admix surface.



08.11.2010 06:20

Facing NW – TWS cut and removed the primary and secondary geomembrane as well as the secondary geocomposite.



08.11.2010 06:21

Facing NW – TWS removed the rut with a shovel.



08.11.2010 06:23

Facing NW – The admix was then compacted to form a smooth, uniform, surface.



08.11.2010 08:35

Facing S – ESI repaired the secondary geomembrane.



08.11.2010 09:35

Facing NW – ESI patched and joined the secondary geocomposite over the secondary geomembrane.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 27
(8/9/10 TO 8/13/10)

Drainage Gravel



Facing NW – TWS placing scrap geocomposite and geotextile over the admix termination in preparation for gravel placement.



Facing NW – TWS placing plywood over the admix subgrade in preparation for constructing the drainage gravel ramp.



Facing NW – TWS using operations soil to construct the drainage gravel access ramp in Cell 10.



Facing N – TWS constructing the drainage gravel access ramp in Cell 10.



Facing SE – TWS constructing the drainage gravel access ramp in Cell 10.



Facing N – TWS utilizing a trackhoe and CAT D6 LGP dozer to construct the southwest haul road.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 27
(8/9/10 TO 8/13/10)

Cell 9 Geosynthetics Continued



Facing SW – TWS placing gravel at the end of the haul road to be stockpiled by the dozer and spread by the trackhoe.



Facing SW – The CAT D6 LGP dozer stockpiling the gravel at the end of the haul road.



Facing NW – The trackhoe spreading the gravel in Cell 10.



Facing S – The southwest haul road in Cell 10.

CQA PHOTOGRAPH LOG WEEK 27
(8/9/10 TO 8/13/10)

Leachate Transmission Piping	
 <p>08.10.2010 08:54</p>	 <p>08.10.2010 08:58</p>
<p>Facing E – Backfill soil over the 16x10-in double containment line between MH-34 to MH-35.</p>	<p>Facing W – Backfill soil over the 16x10-in double containment line between MH-34 to MH-35.</p>
 <p>08.10.2010 08:59</p>	 <p>08.11.2010 14:28</p>
<p>Facing NW – Tank #3 ring wall construction.</p>	<p>Facing W – Backfill soil over the 16x10-in double containment line between MH-34 to MH-35.</p>

CQA PHOTOGRAPH LOG WEEK 28
(8/16/10 TO 8/20/10)

Geosynthetic Placement



Facing N – ESI deploying secondary geomembrane on the west side of Cell 10.



Facing SE – ESI deploying secondary geomembrane on the west side of Cell 10.



Facing NW – ESI welding and repairing the secondary geomembrane tie-in in Cell 9.



Facing S – ESI placing and welding geotextile in Cell 10.



Facing NW – ESI vacuum testing the repairs on the Cell 8/9 tie-in.



Facing S – ESI deploying and welding 16 oz geotextile over the primary geomembrane.

CQA PHOTOGRAPH LOG WEEK 28
(8/16/10 TO 8/20/10)

Geosynthetic Placement (Continued)	
 <p>08.19.2010 13.31</p>	 <p>08.19.2010 09.03</p>
 <p>08.19.2010 13.54</p>	 <p>08.19.2010 12.09</p>
 <p>08.19.2010 12.32</p>	 <p>08.19.2010 13.57</p>
<p>Facing S – ESI staging geocomposite rolls over the deployed secondary geomembrane on the north floor of Cell 10.</p>	<p>Facing SE – ESI placing a protective rub sheet over the exposed geotextile/geocomposite in the Cell 9 riser trench.</p>
<p>Facing S – The protective rubsheet that was placed over the geotextile in the Cell 10 secondary riser trench.</p>	<p>Facing SW – ESI deploying secondary geocomposite on the floor of Cell 9.</p>
<p>Facing NW – The geocomposite deployment on the north slope and floor of Cell 9.</p>	<p>Facing NW – ESI installing the pipe sock and boot over the Cell 9 lysimeter pipe.</p>

CQA PHOTOGRAPH LOG WEEK 28
(8/16/10 TO 8/20/10)

Geosynthetic Placement (Continued)	
<p style="text-align: right; color: orange;">08.20.2010 09:17</p>	<p style="text-align: right; color: orange;">08.20.2010 13:49</p>
<p>Facing SE – ESI deploying secondary geomembrane east of the Cell 10 sump on the north slope and floor of Cell 10.</p>	<p>Facing N – ESI deploying secondary geomembrane on the east termination of Cell 10.</p>
<p style="text-align: right; color: orange;">08.20.2010 13:50</p>	<p style="text-align: right; color: orange;">08/20/2010 04:26 PM</p>
<p>Facing N – ESI repairing the deployed secondary geomembrane in Cell 10.</p>	<p>Facing SW – Secondary geomembrane deployment in Cell 10.</p>

CQA PHOTOGRAPH LOG WEEK 28
(8/16/10 TO 8/20/10)

Cell 10 Secondary Riser Trench and Sump



Facing N – ESI deploying secondary geomembrane in the Cell 10 riser trench and sump.



Facing N – ESI deploying secondary geomembrane in the Cell 10 riser trench and sump.



Facing NE – ESI welding the secondary geomembrane in the Cell 10 riser trench and sump.



Facing NE – ESI placing the geocomposite over the secondary geomembrane in the Cell 10 riser trench and sump.



Facing SE – ESI joining the geocomposite in the Cell 10 riser trench.



Facing N – surveyor painting the edge of the 3:1 secondary backfill in the Cell 10 riser trench.

CQA PHOTOGRAPH LOG WEEK 28
(8/16/10 TO 8/20/10)

Cell 10 Secondary Riser Trench and Sump (Continued)



Facing NE – TWS placing the Cell 10 secondary riser pipes through the openings in the Cell 10 crest pad building.



Facing NE – TWS installing the secondary riser pipes into the Cell 10 riser trench.



Facing S – TWS installing the secondary riser pipes into the Cell 10 sump.



Facing N – TWS backfilling the secondary riser pipes in Cell 10.



Facing SE – TWS compacting the backfill over the secondary riser pipes in Cell 10.



Facing SW – TWS placing Type B drainage gravel into the Cell 10 sump.

CQA PHOTOGRAPH LOG WEEK 28
(8/16/10 TO 8/20/10)

Cell 10 Secondary Riser Trench and Sump (Continued)



Facing S – TWS spreading the drainage gravel in the Cell 10 sump, while the COC inspector tests the riser pipe backfill.



Facing S – The rutting created by the payhaulers during placement of the drainage gravel in the Cell 10 sump.



Facing NW – TWS protecting the leading edge of the secondary geomembrane in the Cell 10 sump prior to leaving for the weekend.



Facing W – TWS creating a small berm over the leading edge of the secondary geomembrane in Cell 10.



Facing N – ESI placed 16 oz. geotextile over the Cell 10 secondary riser trench backfill.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 28
(8/16/10 TO 8/20/10)

Primary Drainage Gravel



Facing N – TWS constructing the SW drainage gravel haul road in Cell 9.



Facing SE – TWS constructing the West drainage gravel haul road in Cell 9.



Facing SW – Extents of rock placement in Cell 9.



Facing SE – TWS constructing the NW drainage gravel haul road in Cell 9.



Facing SW – Extents of rock placement in Cell 9.



Facing NE – TWS spreading drainage gravel in from the West haul road in a 1-ft high lift across Cell 9.

CQA PHOTOGRAPH LOG WEEK 28
(8/16/10 TO 8/20/10)

Cell 9 Secondary Sump



Facing SW – TWS spreading drainage gravel in a 1-ft high lift with CAT D6 LGP dozers.



Facing NW – A CAT D6 LGP dozer spreading drainage gravel in a 1-ft high lift with the aid of laborers.



Facing N – TWS spreading rock near the Cell 7/9 tie-in; two laborers work on minimizing wrinkle propagation.



Facing N – TWS tying in the primary drainage gravel from Cell 7 to the primary drainage gravel in Cell 10.



Facing SW – Extent of gravel placement and liner placement in Cells 9 and 10.

ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 28
(8/16/10 TO 8/20/10)

Earthwork	
<p>08.16.2010 08:45</p>	<p>08.16.2010 15:10</p>
<p>Facing E – TWS backfilling the leachate transmission line between MH-34 and MH-35.</p>	<p>Facing W – TWS compacting the leachate transmission line between MH-34 and MH-35.</p>
<p>08/17/2010 03:16 PM</p>	<p>08.16.2010 10:17</p>
<p>Facing W – TWS compacting the leachate transmission line between MH-9 and MH-38.</p>	<p>Facing W – TWS compacting the leachate transmission line between MH-9 and MH-38.</p>



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 29 (8/23/10 TO 8/27/10)

Admix Placement	
	
Facing E - TWS maintaining the admix surface south of the Cell 10 sump.	Facing E - The admix surface of Cell 10 after TWS moisture conditioned the surface.
	
Facing E - TWS moisture conditioning the admix surface prior to secondary geomembrane placement.	Facing E - TWS utilizing a smooth drum roller to prepare the admix surface for secondary geomembrane placement.

CQA PHOTOGRAPH LOG WEEK 29
(8/23/10 TO 8/27/10)

Geosynthetic Placement



Facing S – ESI removing dirt from the secondary geomembrane prior to placing secondary geocomposite in Cell 9.



Facing W – ESI joined the geocomposite together with zip ties.



Facing NE – ESI deploying secondary geocomposite on the north slope and floor of Cell 9 west of the sump.



Facing N – ESI completing the secondary geocomposite tie-in on the north slope of Cell 9.



Facing S – TWS and ESI constructing the secondary drainage gravel/geocomposite tie-in on the west side of Cell 9.



Facing N – ESI and TWS placing the secondary drainage gravel over the secondary geocomposite along the Cell 9 tie-in.

CQA PHOTOGRAPH LOG WEEK 29
(8/23/10 TO 8/27/10)

Geosynthetic Placement (Continued)	
 <p>08-23-2010 09:47</p>	 <p>08-24-2010 09:03</p>
<p>Facing N – ESI placing a rub sheet over the secondary geocomposite in order to deploy primary geomembrane.</p>	<p>Facing NW – ESI deploying primary geomembrane in Cell 9.</p>
 <p>08-24-2010 14:30</p>	 <p>08-24-2010 15:30</p>
<p>Facing S – ESI deploying primary geomembrane over secondary geocomposite in Cell 9.</p>	<p>Facing SW – ESI deployed primary geomembrane to the west shoulder of the Cell 9 sump.</p>
 <p>08-25-2010 05:25</p>	 <p>08-25-2010 09:57</p>
<p>Facing S – ESI cut the secondary geomembrane near the Cell 9 riser trench in order to remove large wrinkles in the geomembrane.</p>	<p>Facing NW – ESI "walking-out" the wrinkles on the north slope of Cell 9.</p>

CQA PHOTOGRAPH LOG WEEK 29
(8/23/10 TO 8/27/10)

Geosynthetic Placement (Continued)



Facing NW – ESI welding the panel that was cut in order to remove the wrinkles east of the Cell 9 riser trench.



Facing S – The north slope of Cell 9 after the wrinkles had been removed.



Facing S – ESI placing secondary geocomposite on the north half of Cells 9 and 10.



Facing N – ESI completing the primary geomembrane tie-in on the west side of Cell 9.



Facing N – ESI deploying secondary geocomposite on the north slope of Cell 9 east of the riser trench.



Facing NE - ESI deploying secondary geocomposite on the north slope of Cell 9 east of the riser trench.



ERDF CONSTRUCTION CELLS 9-10

CQA PHOTOGRAPH LOG WEEK 29 (8/23/10 TO 8/27/10)

Geosynthetic Placement (Continued)	
	
	