SLR International Corp

March 2, 2010

Mr. Paul Skyllingstad
Washington Department of Ecology
PO Box 47600
Olympia, WA 98504

Re: Bioremediation Cell Decommissioning and Closure
Former Columbia Marine Lines Site
6601 NW Old Lower River Road, Vancouver, WA
SLR Project No.: 008.0205.00020

Dear Mr. Skyllingstad:

SLR International Corp has prepared this summary of the activities associated with the decommissioning and closure of the bioremediation cell at the former Columbia Marine Lines site on behalf of Crowley Marine Services, Inc. (Crowley), a successor to Columbia Marine Lines. On August 19, 1985, Columbia Marine Lines entered into Order No. DE 85-591 with the Washington State Department of Ecology (Ecology) to conduct a remedial action at the former Columbia Marine Lines site, located at 6305 Lower River Road in Vancouver, Washington (Site).

The site location is shown on **Figure 1**. For the purposes of this report, the Site is defined as the area illustrated on **Figure 2**, which includes portions of Clark County Tax Lot 153104000 and 152800000. The approximate area affected by the remediation activity is three acres. The Site is currently vacant. Prior to remediation, the Site was covered with grass, small trees, and other vegetation. The work was conducted under City of Vancouver Permit number GRD2008-00099. As of February 17, 2010, this permit has been closed by the City of Vancouver, all excavation work is complete, and the City of Vancouver has completed its final inspections as confirmed through a telephone conversation between the City of Vancouver and Steve Hammer with SLR.

The scope of work for constructing, operating, and closing the bioremediation cell was outlined in the December 3, 2008 Final Remedial Action Work Plan. Based on analytical results on two quarters of soil sampling conducted in the bioremediation cell, Crowley proposed decommissioning the cell in the *Third Quarter 2009 Remedial Action Report* (SLR, October 5 2009). Approval for decommissioning of the bioremediation cell was provided by Ecology in a letter, dated November 16, 2009, to Mr. Stephen Wilson of Crowley.

Bioremediation cell Construction and Operation

Soil excavation and construction of the bioremediation cell was completed in January and February 2009 by Wyser Construction, Co. (Wyser), of Snohomish, Washington. Excavated soil with TPH concentrations in excess of 5,070 mg/kg was placed in the lined bioremediation cell for treatment, and construction was completed on March 10, 2009. The approximate configuration of the bioremediation cell is shown on **Figure 2**. Nitrogen-phosphorus-potassium fertilizer was applied to the cell and tilled into the soil in July and September 2009 to enhance the bioremediation process. The cell was irrigated with water after the fertilization events. The construction and operation of the cell is described in more

detail in the *Remedial Action Report* (SLR, May 12, 2009), the *Remedial Action Report – Second Quarter 2009* (SLR, July 30, 2009), and the *Remedial Action Report – Third Quarter 2009* (SLR, October 5, 2009).

Precipitation falling on the bioremediation cell adsorbed to the soil in the cell and the excess water flowed towards a collection sump. Water entering the collection sump was pumped to a storm water treatment system consisting of an oil/water separator tank, bag filters, and activated carbon filters. The treated water was pumped to the existing, approved groundwater injection point at the Site.

To monitor the progress of the bioremediation, two rounds of soil samples and three rounds of storm water samples were collected while the bioremediation cell was in operation. All soil samples collected from the bioremediation cell were below the 5,070 mg/kg soil cleanup level for total petroleum hydrocarbons. The average of the results from August 25, 2009 was 2,090 mg/kg TPH, which is roughly 73% of the average concentration of 2,881 mg/kg measured during the May 28, 2009 sampling event. Based on these results, it is apparent that the bioremediation cell was effective at reducing contaminant concentrations and that the soil in the bioremediation cell is below the cleanup level. Based on the sampling results, Crowley requested to decommission the bioremediation cell in October 2009.

Bioremediation Cell Decommissioning and Closure

Crowley contracted with Wyser to complete the bioremediation cell closure. SLR personnel were on site to observe closure activities, which began on December 2, 2009. The closure procedure was as follows:

- Wyser removed and stockpiled the remaining treated soil to expose the HDPE liner. The total volume of soil moved was approximately 4,000 cubic yards (cy). An additional 4,000 cy had already been stockpiled following the first round of fertilization, mixing, and sampling of the bioremediation cell in September 2009. (See the attached Photo Sheet 1.)

- Wyser removed the plastic liner from the entire bioremediation cell area.

- The holding tank at the storm water treatment system was emptied and treated through the bag filter and activated carbon treatment system. Approximately 1,200 gallons of water was treated and injected into the existing approved injection point. The stormwater collection sump, holding tank, piping, bag filters, and activated carbon were removed for disposal off site by Wyser. The carbon was transported to Cemex in Everett, Washington for disposal. The total volume of stormwater treated by the system during operation of the bioremediation cell was 38,005 gallons.

- Wyser excavated approximately two feet below the liner to clear an area for placement of the treated soil and stockpiled this soil to use as a cap above the treated soil and complete the final grade of the Site. (See attached Photo Sheet 2.)

- Wyser applied a layer of Organoclay oil-adsorbent product (manufactured and sold by Cetco) throughout the floor of excavation. The 7,500 lbs of Organoclay (delivered to the site in 5 super sacks) was mixed into the top six inches of the soil at the bottom of the area in a mixture of approximately one-percent by weight of Organoclay. (See attached Photo Sheet 2.) The organoclay is an oil-adsorbent material that was placed at the bottom of the excavation to limit possible migration of TPH due to infiltration of rainwater; it is not a "liner" or impermeable material.

- Following application of the Organoclay layer, Wyser placed the treated soil in thicknesses up to five feet, depending on the initial and completed grade. The surface was graded so that the highest point would be in the center of the area. (See attached Photo Sheet 3.)

- Backfilled soil was compacted in two foot lifts with a requirement of 95% compaction for the top two feet and 90% compaction for other backfilled soil. (See attached Photo Sheet 3.) Compaction records have been included as Attachment 1 to this letter.

- Wyser finished final grading of the Site, grading the surface away from the center of the area so that stormwater would run off the area where the treated soil was placed. (See attached Photo Sheet 4). A cross section of the area has been included as Figure 3.

- Following completion of the backfill and compaction on December 16, 2009, Wyser removed the silt fencing, safety fencing, and all other equipment from the site.

- Following completion of the work, the City of Vancouver completed a final inspection for the Grading Permit, including an erosion control inspection, and the bioremediation cell portion of the project was completed.

This summary letter is a notice that bioremediation cell decommissioning and closure activities were completed on December 16, 2009, in accordance with the *Final Remedial Action Work Plan* (SLR, December 3, 2008) and the *Third Quarter 2009 Remedial Action Report* (SLR, October 5, 2009).

Completion of the closure of the bioremediation cell ends Task 4 of the *Final Remedial Action Work Plan* and begins Task 5, Monitored Natural Attenuation. This task will include the installation of new monitoring wells during first quarter 2010.

Please feel free to contact us with any questions.

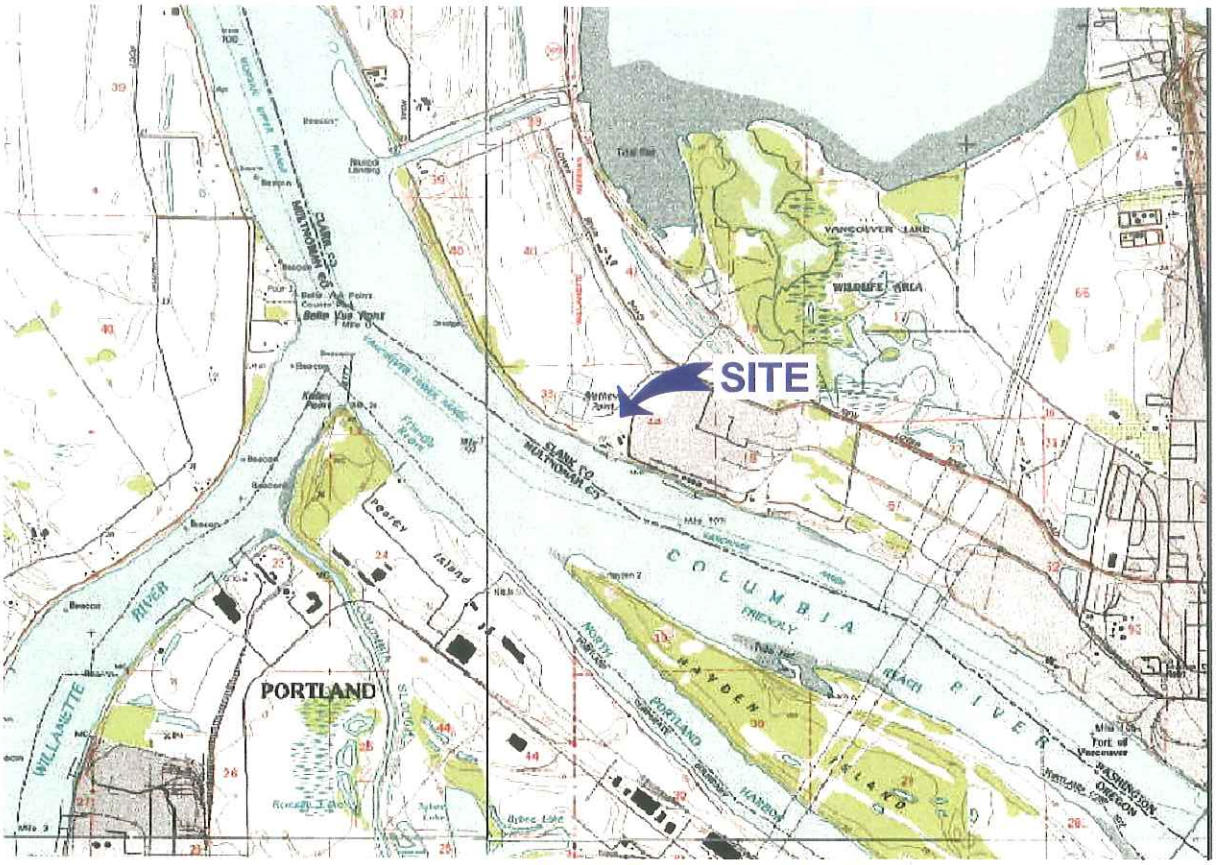
Sincerely,
SLR International Corp

Chris Kramer
Project Geologist

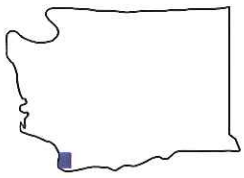
Steven R. Hammer, P.E.
Senior Engineer

Attachments Figures 1 through 3
Photo Sheets 1 through 4
Attachment 1 – Soil Compaction Records

cc: Stephen Wilson, Crowley Marine Services
Steve Shaw, Alcoa



REFERENCE: USGS 7.5 MINUTE QUADRANGLE; VANCOUVER, WASHINGTON; 1990



QUADRANGLE LOCATION

0 1/4 1/2 1

SCALE IN MILE

0 1000 2000

1 INCH = 2000 FEET

THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. ACTUAL LOCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.

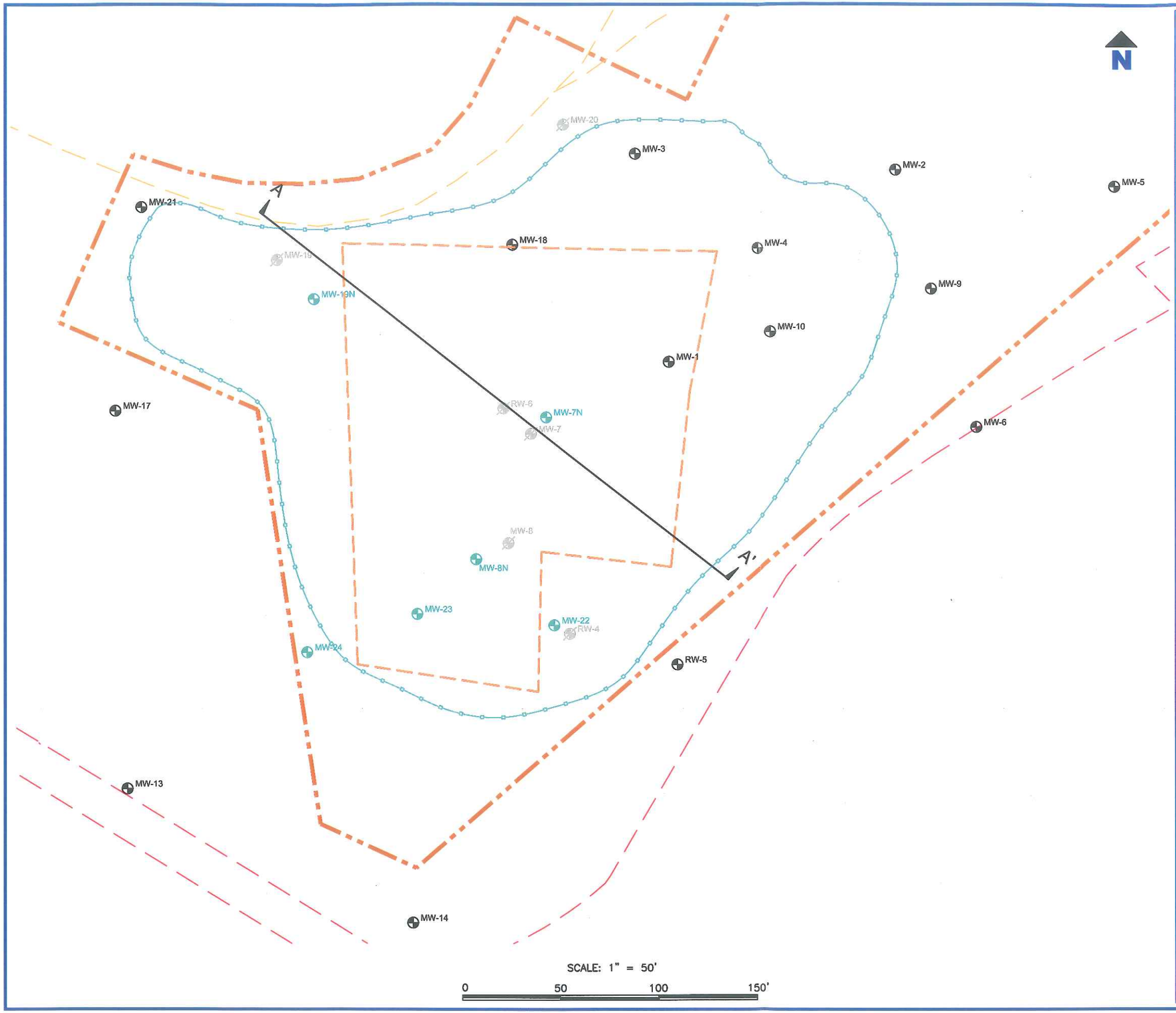
SLR

FORMER COLUMBIA MARINE LINES FACILITY
6205 LOWER RIVER ROAD
VANCOUVER, WASHINGTON

Report
REMEDIAL ACTION WORK PLAN

Drawing
SITE LOCATION MAP

Date November 26, 2008	Scale AS SHOWN	Fig. No. 1
File Name Figure 1 - Site Location Map-1	Project No. 008.0205.00007	



NOTES

LEGEND

- PROPERTY LINE
- ASPHALT ROAD
- DIRT ROAD
- MW-1 GROUNDWATER MONITORING WELL
- MW-7 ABANDONED GROUNDWATER MONITORING WELL
- OPERATING BIOREMEDIATION CELL PERIMETER
- FINAL TREATED SOIL DISPOSAL AREA
- A A' CROSS SECTION LOCATION (SEE FIGURE 3)
- BH PROPOSED GROUNDWATER MONITORING WELL

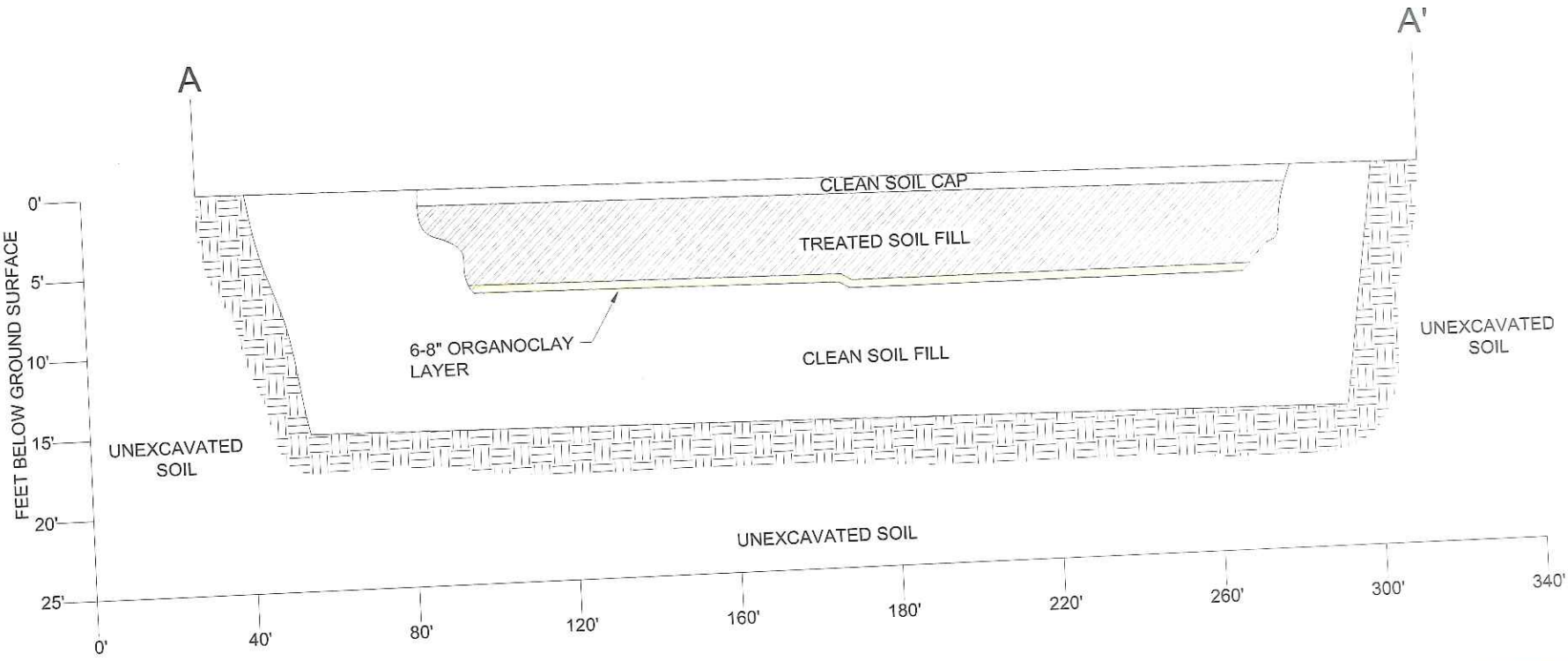
FORMER COLUMBIA MARINE LINES FACILTIY
6305 LOWER RIVER ROAD
VANCOUVER, WASHINGTON

Report: BIOREMEDIATION CELL DECOMMISSIONING AND CLOSURE

Drawing: BIOREMEDIATION CELL AND ORGANOCLAY LINER CONFIGURATION

Date JANUARY 2010	Scale NOT TO SCALE	Fig. No. 2
File Name Biocell Extents-3	Project No. 008.0205.00020	

SLR



LEGEND

- UNEXCAVATED SOIL
- CLEAN SOIL FILL/CAP
- TREATED SOIL FILL
- ORGANOCLAY

VERTICAL SCALE
SCALE: 1" = 10'

0 10 20 30'

HORIZONTAL SCALE
SCALE: 1" = 40'

0 40 80 120'

ACTUAL LOCATIONS MAY VARY AND NOT ALL STRUCTURES ARE SHOWN.

SLR

FORMER COLUMBIA MARINE LINES FACILITY
6305 LOWER RIVER ROAD
VANCOUVER, WASHINGTON

Report: BIOREMEDIATION CELL DECOMMISSIONING AND CLOSURE

Drawing: CROSS SECTION OF EXCAVATED AREA

Date: February 19, 2010
File Name: Biocell Extents-2
Scale: AS SHOWN
Project No.: 008.0205.00020
Fig. No.: 3

Removal of remaining treated soil to expose HDPE liner

Site Photographs 12/2 and 12/3/09	**Photo Sheet 1** Biocell Closure Former Columbia Marine Lines Vancouver, WA	SLR International Corp

Excavation of unimpacted soil below HDPE liner for cap and final grade

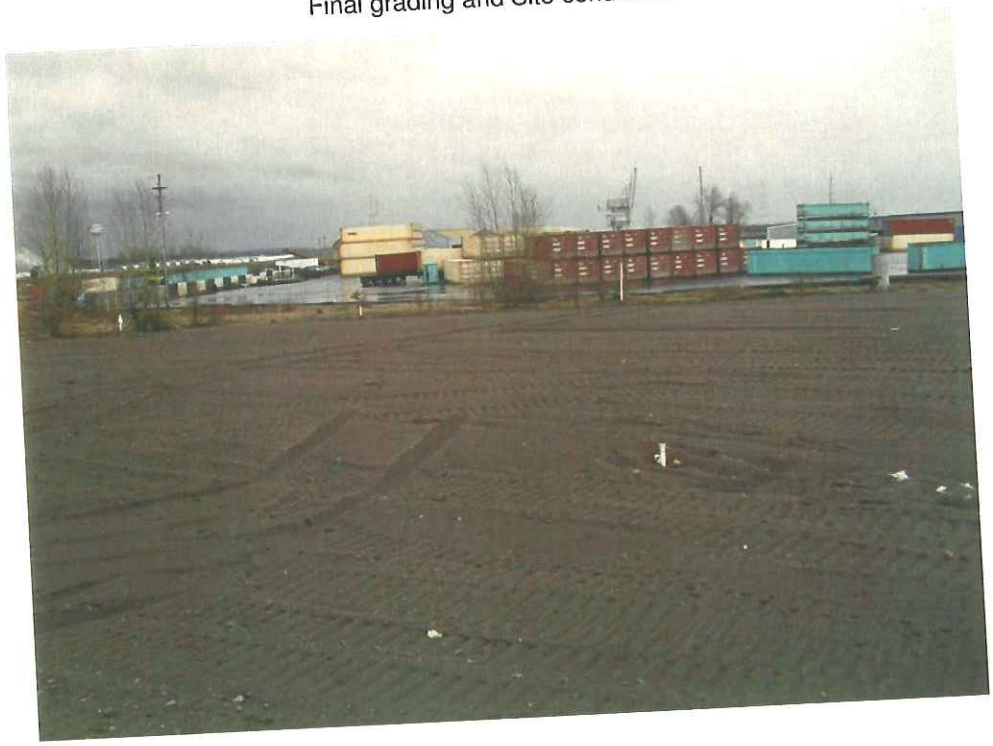
Application of Organoclay

Site Photographs 12/7 and 12/8/09	**Photo Sheet 2** Biocell Closure Former Columbia Marine Lines Vancouver, WA	SLR International Corp

Spreading treated soil over Organoclay liner and compacting in 2' lifts

Site Photographs 12/9 and 12/10/09	**Photo Sheet 3** Biocell Closure Former Columbia Marine Lines Vancouver, WA	SLR International Corp

Final grading and Site conditions



Site Photographs 1/14/2010	**Photo Sheet 4** Biocell Closure Former Columbia Marine Lines Vancouver, WA	SLR International Corp

Attachment 1

Soil Compaction Records

MAYES TESTING ENGINEERS, INC.

Seattle Office
20225 Cedar Valley Road
Suite 110
Lynnwood, WA 98036
ph 425.742.9360
fax 425.745.1737

Tacoma Office
10029 S. Tacoma Way
Suite E-2
Tacoma, WA 98499
ph 253.584.3720
fax 253.584.3707

Portland Office
7911 NE 33rd Drive
Suite 190
Portland, OR 97211
ph 503.281.7515
fax 503.281.7579

Project No.	P09013
Project	Crowley Marine Site
Address	6503 Old NW Lower River Road, Vancouver, WA
Permit No.	N/A
Engineer	SLR International Corp.
Contractor	Wyser Construction

Record No.	006
Date	December 9, 2009 (a.m.)
Weather	Clear, cold
Inspection	Soil Density
Sample(s)	none

Arrived on site as requested to provide in place density testing of gray sand (LAB #1596) placed as backfill for contaminated soil pit. The contractor placed one 2' lift. Obtained three tests and all met or exceeded the minimum 90% compaction requirement. See attached Field Density Test Report for locations and results.

To the best of our knowledge, items inspected this date are in accordance with approved plans and specifications.

Inspector: Cliff Zenger
WABO # SI 01733

Reviewed by:

Mark A. Galusha, P.E.

MAYES TESTING ENGINEERS, INC

20225 Cedar Valley Road, Suite 110 Ph 425.742.9360
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Tacoma, WA 98499 Fax 253.584.3707

7911 NE 33rd Drive, Suite 190 Ph 503.281.7515
Portland, OR 97211 Fax 503.281.7579

Soil
FIELD DENSITY TEST REPORT
ASTM D 2922 / D 3017

Project No.: P09013 Date: 12/9/2009

Project: Crowley Marine Site

Inspector: Cliff Zenger

MTE Nuclear Gauge No.: 9

Test #	Location A.M. Inspection	Depth or Elevation (feet)	Backscatter / Direct Transmission	Laboratory		Field				Soil Type Description
				Max Dry Density (PCF)	OMC %	Wet Density (PCF)	Dry Density (PCF)	Moisture Content %	Compaction %	
1	NW corner of pit for contanimated soil	-2'	12"	102.8	15.4	115.8	98.2	17.9	96	gray sand
2	SW corner of pit for contanimated soil	-2'	12"	102.8	15.4	116.0	100.5	15.4	98	gray sand
3	NE corner of pit for contanimated soil	-2'	12"	102.8	15.4	117.8	104.0	13.3	100+	gray sand

Specification Compaction and Material : 90%

☑ ASTM D 1557 (Modified Proctor)

☐ ASTM D 698 (Standard Proctor)

Type and Number of earth moving units: 2-track hoes, 1-dozer

Type and Number of Compaction units: 1-SDVR

Number of Passes: various Thickness of lift: 24"

Method of Adding Moisture: water truck/as is

☑ In our opinion, fill generally meets specifications as indicated by test numbers: tests 1 to 3

☐ In our opinion, fill does not meet specifications as indicated by test numbers:

☑ Fill test meets compaction specifications

☑ Contractor Advised Bruce

☐ Full-time observation ☐ Part-time observation

QC Sample: Test No.: Dry Density: Moisture %:

MTE Lab #1596

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ph 503.281.7515
fax 503.281.7579

Project No.	P09013
Project	Crowley Marine Site
Address	6503 Old NW Lower River Road, Vancouver, WA
Permit No.	N/A
Engineer	SLR International Corp.
Contractor	Wyser Construction
Record No.	010
Date	December 11, 2009
Weather	Clear
Inspection	Soil Density
Sample(s)	none

Arrived on site as scheduled to perform in place nuclear density testing. Upon arrival, was informed there was nothing to test because the contractor did not get the fill in to be tested.

Inspector: Cliff Zenger
WABO # SI 01733

Reviewed by:

Mark A. Galusha, P.E.

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Project No.	P09013
Project	Crowley Marine Site
Address	6503 Old NW Lower River Road, Vancouver, WA
Permit No.	N/A
Engineer	SLR International Corp.
Contractor	Wyser Construction
Record No.	007
Date	December 9, 2009 (p.m.)
Weather	Clear, cold
Inspection	Soil Density
Sample(s)	none

Arrived on site as requested to provide in place density testing of gray sand (Lab #1596) placed as backfill for contaminated soil pit. The contractor is 4' below finished grade at this time. Three tests were taken and all met or exceeded the minimum 90% compaction requirement.

To the best of our knowledge, items inspected this date are in accordance with approved plans and specifications.

Inspector: Cliff Zenger
WABO # SI 01733

Reviewed by:

Mark A. Galusha, P.E.

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Soil
FIELD DENSITY TEST REPORT
ASTM D 2922 / D 3017

Project No.: P09013 Date: 12/9/2009
Project: Crowley Marine Site
Inspector: Cliff Zenger (p.m.)
MTE Nuclear Gauge No.: 9

Test #	Location A.M. Inspection	Depth or Elevation (feet)	Backscatter / Direct Transmission	Laboratory		Field				Soil Type Description
				Max Dry Density (PCF)	OMC %	Wet Density (PCF)	Dry Density (PCF)	Moisture Content %	Compaction %	
1	NW corner of pit for contanimated soil	-4'	12"	102.8	15.4	111.1	99.2	12.0	97	gray sand
2	SW corner of pit for contanimated soil	-4'	12"	102.8	15.4	113.2	98.9	14.4	96	gray sand
3	NE corner of pit for contanimated soil	-4'	12"	102.8	15.4	118.4	102.7	15.3	100+	gray sand

Specification Compaction and Material : 90%
☑ ASTM D 1557 (Modified Proctor)
☐ ASTM D 698 (Standard Proctor)
Type and Number of earth moving units: 2-track hoes, 1-dozer
Type and Number of Compaction units: 1-SDVR
Number of Passes: various Thickness of lift: 24"
Method of Adding Moisture: water truck/as is
Comments: MTE Lab #1596

☑ In our opinion, fill generally meets specifications as indicated by test numbers: tests 1 to 3
☐ In our opinion, fill does not meet specifications as indicated by test numbers:
☑ Fill test meets compaction specifications
☑ Contractor Advised Bruce
☐ Full-time observation ☐ Part-time observation
QC Sample: Test No.: Dry Density: Moisture %:

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ph 503.281.7515
fax 503.281.7579

Project No.	P09013
Project	Crowley Marine Site
Address	6503 Old NW Lower River Road, Vancouver, WA
Permit No.	N/A
Engineer	SLR International Corp.
Contractor	Wyser Construction
Record No.	011
Date	December 15, 2009 (a.m.)
Weather	Rain
Inspection	Soil Density
Sample(s)	none

Arrived on site as requested to provide in place nuclear density testing of gray sand (Lab #1596) placed as backfill for contaminated soil pit. The contractor is at finished grade for west pad and south pad at this time. Obtained six tests (3) for each pad and all tests met or exceeded the minimum 90% compaction requirement. See attached Field Density Test Report for results and locations.

To the best of our knowledge, items inspected this date are in accordance with approved plans and specifications.

Inspector: Cliff Zenger
WABO # SI 01733

Reviewed by:

Mark A. Galusha, P.E.

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Soil
FIELD DENSITY TEST REPORT
ASTM D 2922 / D 3017

Project No.: P09013 Date: 12/14/2009
Project: Crowley Marine Site
Inspector: Cliff Zenger (a.m.)
MTE Nuclear Gauge No.: 9

Test #	Location A.M. Inspection	Depth or Elevation (feet)	Backscatter / Direct Transmission	Laboratory		Field				Soil Type Description
				Max Dry Density (PCF)	OMC %	Wet Density (PCF)	Dry Density (PCF)	Moisture Content %	Compaction %	
1	West Pad, west side	FG	12"	102.8	15.4	113.5	99.4	14.1	97	gray sand
2	West Pad, south side	FG	12"	102.8	15.4	112.6	96.7	16.4	94	gray sand
3	West Pad, north side	FG	12"	102.8	15.4	111.4	96.0	16.0	93	gray sand
4	South Pad, south side	FG	12"	102.8	15.4	115.8	98.1	17.9	96	gray sand
5	South Pad, east side	FG	12"	102.8	15.4	115.9	100.1	15.4	97	gray sand
6	South Pad, west side	FG	12"	102.8	15.4	114.1	97.3	14.6	95	gray sand

Specification Compaction and Material : 90%
☑ ASTM D 1557 (Modified Proctor)
☐ ASTM D 698 (Standard Proctor)
Type and Number of earth moving units: 2-track hoes, 1-dozer
Type and Number of Compaction units: 1-SDVR
Number of Passes: various Thickness of lift: 24"
Method of Adding Moisture: water truck/as is
Comments: MTE Lab #1596

☑ In our opinion, fill generally meets specifications as indicated by test numbers: tests 1 to 6
☐ In our opinion, fill does not meet specifications as indicated by test numbers:
☑ Fill test meets compaction specifications
☑ Contractor Advised Bruce
☐ Full-time observation ☐ Part-time observation
QC Sample: Test No.: Dry Density: Moisture %:

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Project No.	P09013
Project	Crowley Marine Site
Address	6503 Old NW Lower River Road, Vancouver, WA
Permit No.	N/A
Engineer	SLR International Corp.
Contractor	Wyser Construction

Record No.	008
Date	December 10, 2009 (a.m.)
Weather	Clear, cold
Inspection	Soil Density
Sample(s)	none

Arrived on site as requested to perform in place density testing of gray sand (Lab #1596) placed as backfill for contaminated soil pit. The contractor placed backfill at 2' below finished grade. Obtained three tests and all met or exceeded the minimum 90% compaction requirement. See attached Field Density Test Report for location and results.

To the best of our knowledge, items inspected this date are in accordance with approved plans and specifications.

Inspector: Cliff Zenger
WABO # SI 01733

Reviewed by:

Mark A. Galusha, P.E.

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Soil
FIELD DENSITY TEST REPORT
ASTM D 2922 / D 3017

Project No.: P09013 Date: 12/10/2009

Project: Crowley Marine Site

Inspector: Cliff Zenger (a.m.)

MTE Nuclear Gauge No.: 9

Test #	Location A.M. Inspection	Depth or Elevation (feet)	Backscatter / Direct Transmission	Laboratory		Field				Soil Type Description
				Max Dry Density (PCF)	OMC %	Wet Density (PCF)	Dry Density (PCF)	Moisture Content %	Compaction %	
1	NW corner of pit for contanimated soil	-2'	12"	102.8	15.4	109.8	99.7	10.2	98	gray sand
2	SW corner of pit for contanimated soil	-2'	12"	102.8	15.4	110.1	100.1	10.0	97	gray sand
3	NE corner of pit for contanimated soil	-2'	12"	102.8	15.4	107.1	94.4	13.4	92	gray sand

Specification Compaction and Material : 90%
- ☑ ASTM D 1557 (Modified Proctor)
- ☐ ASTM D 698 (Standard Proctor)

Type and Number of earth moving units: 2-track hoes, 1-dozer

Type and Number of Compaction units: 1-SDVR

Number of Passes: various Thickness of lift: 24"

Method of Adding Moisture: water truck/as is

Comments: MTE Lab #1596

☑ In our opinion, fill generally meets specifications as indicated by test numbers: tests 1 to 3

☐ In our opinion, fill does not meet specifications as indicated by test numbers:

☑ Fill test meets compaction specifications

☑ Contractor Advised Bruce

☐ Full-time observation ☐ Part-time observation

QC Sample: Test No.: _____ Dry Density: _____ Moisture %: _____

MAYES TESTING ENGINEERS, INC.

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Project No.	P09013
Project	Crowley Marine Site
Address	6503 Old NW Lower River Road, Vancouver, WA
Permit No.	N/A
Engineer	SLR International Corp.
Contractor	Wyser Construction
Record No.	009
Date	December 10, 2009 (p.m.)
Weather	Clear
Inspection	Soil Density
Sample(s)	none

Arrived on site as requested to perform in place density testing of gray sand (Lab #1596) placed as backfill for contaminated soil pit. The contractor placed another 2' lift bringing soil to finished grade. Obtained three tests and all met or exceeded the minimum 90% compaction requirement. See attached Field Density Test Report for location and results.

To the best of our knowledge, items inspected this date are in accordance with approved plans and specifications.

Inspector: Cliff Zenger
WABO # SI 01733

Reviewed by:

Mark A. Galusha, P.E.

MAYES TESTING ENGINEERS, INC

20225 Cedar Valley Road, Suite 110 Ph 425.742.9360
Lynnwood, WA 98036 Fax 425.745.1737

10029 S. Tacoma Way, Suite E-2 Ph 253.584.3720
Tacoma, WA 98499 Fax 253.584.3707

7911 NE 33rd Drive, Suite 190 Ph 503.281.7515
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Soil
FIELD DENSITY TEST REPORT
ASTM D 2922 / D 3017

Project No.: P09013 Date: 12/10/2009
Project: Crowley Marine Site
Inspector: Cliff Zenger (p.m.)
MTE Nuclear Gauge No.: 9

Test #	Location A.M. Inspection	Depth or Elevation (feet)	Backscatter / Direct Transmission	Laboratory		Field				Soil Type Description
				Max Dry Density (PCF)	OMC %	Wet Density (PCF)	Dry Density (PCF)	Moisture Content %	Compaction %	
1	NW corner of pit for contanimated soil	FG	12"	102.8	15.4	116.2	99.6	16.7	97	gray sand
2	SW corner of pit for contanimated soil	FG	12"	102.8	15.4	113.6	99.8	13.8	97	gray sand
3	NE corner of pit for contanimated soil	FG	12"	102.8	15.4	116.9	98.5	18.6	96	gray sand

Specification Compaction and Material : 90%
☑ ASTM D 1557 (Modified Proctor)
☐ ASTM D 698 (Standard Proctor)

Type and Number of earth moving units: 2-track hoes, 1-dozer

Type and Number of Compaction units: 1-SDVR

Number of Passes: various Thickness of lift: 24"

Method of Adding Moisture: water truck/as is

Comments: MTE Lab #1596

☑ In our opinion, fill generally meets specifications as indicated by test numbers: tests 1 to 3

☐ In our opinion, fill does not meet specifications as indicated by test numbers:

☑ Fill test meets compaction specifications

☑ Contractor Advised Bruce

☐ Full-time observation ☐ Part-time observation

QC Sample: Test No.: _____ Dry Density: _____ Moisture %: _____