8/8/07

23:00 D. Russell arrives at Tannery Bay
23:07 D. Russell transitions shift with G. Swartz
23:12 D. Russell arrives on Barge. Currently dredging at station 80.
23:35 Dredging stops for full shuttle and shift change
23:50 Shift change complete, MCM Takes out full shuttle

8/9/07

00:20 Empty shuttle in place
00:25 Dredging resumes
00:56 Advance Barge to Station 89
01:30 Dredging Stops to change out Shuttle
01:33 Full shuttle removed
02:00 Dredging resumes
03:15 Dredging Stops, Full shuttle taken to No. 56
03:50 Empty shuttle in place
03:55 Shift barge
03:58 Dredging resumes
04:42 Shift Barge
04:50 Dredging resumes
05:11 Dredging Stops to move silt curtain
05:30 MCM finishes adjusting silt curtain and dredging resumes
05:40 Dredging stops to change out shuttle
06:15 Dredging resumes
06:30 EC Ken and D. Russell depart barge to collect water levels
06:35 Water level before download: 38½" After: 38"
06:42 EC Skip and EC Jim on board - EC Ken and D. Russell return to barge
06:50 EC Ken departs barge
06:55 EC Skip departs barge

8/9/07

7:16 Dredging
7:20 Dredging
7:25 D. Russell C
Shift wit
7:30 D. Russell
7:50 D. Russell
paperwork
9:00 Depard

Bay
G. Swartz
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Takes out
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arge to
After 38"
ECKen and

8/9/07

7:16 Dredging stops to advance to Station 97

7:20 Dredging resumes

7:25 D. Russell departs for shore and transitions Shift with Elmer.

7:30 D. Russell departs bay and goes to MCM Yard

7:50 D. Russell arrives at MCM Yard to finish paperwork

9:00 Depard MCM Yard END of SHIFT

Dane Russell

8/9/07

23:00 D. Russell arrives at Tannery Bay

23:15 D. Russell Transitions shift with G. Swantz

23:20 D. Russell arrives on barge. MCM is currently out dredging to refuel crane. Currently at Station 122

23:25 Dredging resumes

23:30 Dredging stops for shift change

23:55 MCM changes out full shuttle

8/10/07

00:45 Empty shuttle in place, dredging resumes

01:13 Shift barge to Station 135

02:13 Dredging stops to shift barge

02:18 Take out full shuttle

02:48 Resume dredging

03:54 Dredging stops to change out shuttle

03:57 Shift barge

04:02 Finish shifting to Station 140. Still waiting for shuttle

04:26 Empty shuttle in place

04:30 Dredging resumes

05:29 Dredging stops to take out full shuttle

06:03 Empty shuttle in place, dredging resumes

06:15 EC Ken and D. Russell depart barge to download water levels

06:20 Water level before download: 33 3/4" After: 34"

06:32 EC Ken and D. Russell return to barge. EC Skip boards barge

06:40 EC Skip discusses Dredge Lane endpoints with MCM Wayne. The end station for Dredge lane 4A is 200 ft and for Dredge lane 5A Station 261

06:45 EC Ken & Skip depart barge, EC Jim on board

06:58 Dredging stops to shift barge.

07:00 Dredging resumes

07:10 D. Russell departs barge to transition with E. Vanlibergen

07:20

07:30

08:30

8/10/07

07:30 D. Russell departs Tannery Bay for MCM Yard

07:30 Arrive at MCM yard and finish paperwork

08:30 Depart MCM Yard. END of SHIFT

Duane Russell

8/10/07

23:05 D. Russell arrives at Tannery Bay

23:10 Transition shift with G. Swartz

23:30 D. Russell arrives on barge, currently dredging station 162

23:38 Dredging stops for shift change

23:57 Dredging resumes

8/11/07

00:07 Dredging stops to take out full shuttle

00:45 Generator lights went out, MCM lets them cool down before turning back on

00:50 Empty shuttle in place

01:05 Dredging resumes

01:30 Dredging stops, generator lights go out again

01:50 Lights back on, dredging resumes

03:35 Dredging stops to take out full shuttle lots of wood taken in this load

03:55 Generator lights go out again, change generator fuel filter

04:10 Empty shuttle returns and lights back on

04:14 Dredging resumes

04:41 Dredging stops to advance to station 178

04:51 Dredging resumes

05:54 Dredging stops to take out full shuttle

06:28 Empty shuttle in place, dredging resumes

06:30 EC Ken and D. Russell depart to collect water levels

06:35 Water level before and after download: 38"

06:40 EC Ken and D. Russell return to barge. EC Jim on board

06:45 EC Ken departs

06:55 D. Russell departs to transition shift with G. Swartz

07:00 Depart bay for MCM yard to finish paperwork

07:15 Arrive at MCM yard.

08:00 Depart MCM yard. END of DAY

Diane Russell

8/12/07

23:25 D. Russell on site at Tannery Bay

23:35 MCM Crew and D. Russell depart dock for barge.

23:40 Arrive at barge. EC Ken on board. MCM working on ~~powering~~ up equipment.

8/13/07

00:00 Crane battery not working. MCM working to power up crane.

00:37 MCM works to put working curtain in place

01:20: Empty shuttle in place. MCM discussing what the end point is and where its located in the computer.

01:30 Dredging resumes at station 180. Lots of wood being loaded in shuttle

02:04 Dredging stops to fix computer

02:07 Dredging resumes

03:00 Shift barge. Stop dredging

03:07 Dredging resumes

03:30 Dredging stops to remove full shuttle

04:05 Empty shuttle in place

04:07 Dredging resumes

05:35 Advance to station 190

06:30 EC Ken and D. Russell depart to download water levels

06:35 Water level before and after download: 29½"

07:00 EC Ken and D. Russell depart barge and EC Jim on board

07:05 D. Russell arrives on shore and transitions shift with E. Vanwagoner

07:10 Depart Bay for MCM Yard

07:25 Arrive at MCM yard to finish paperwork

08:15 D. Russell departs MCM Yard. END of Shift

Diane Russell

8/13/07

23:00 D. Russell arrives at Tannery Bay

23:15 D Russell transitions shift with Andy Davis
MCM Stops dredging to refuel crane

23:25 Arrive on barge, MCM still refueling at
Station 213

23:30 Dredging resumes.

23:40 Dredging stops for shift change

23:51 Dredging resumes

8/14/07

00:35 Dredging stops to take out full shuttle

01:04 Dredging resumes

03:10 Dredging stops to take out full shuttle

03:25 Shuttle attempted to be moved to No. 56, but
was stuck due to low water (599.8)

03:59 water level at 599.5

04:58 Water level at 600.0 - shuttle is removed

05:35 Empty shuttle in place, dredging resumed

06:00 EC Ken and D. Russell depart barge to collect
water levels.

06:15 Water level before download: 30" After: 30½"

06:23 EC Ken and D. Russell return to barge

06:25 EC Skip on board

06:40 EC Ken, D. Russell and EC Skip depart barge
& transition shift with EC Jim and EC
VanWagoner.

0650 D. Russell departs Tannary Bay

0700 Arrive at MCM yard to finish paperwork

0830 Depart MCM yard. END of Shift

Duane Russell

8/14/07

23:00 D. Russell arrives on site at Tannery Bay

23:15 D. Russell on dock and transitions shift with A. Rains

23:20 D. Russell arrives on barge and MCM currently dredging at Station 35.

23:42 Dredging stops for shift change

23:55 Dredging resumes

8/15/07

0034 Dredging stops to reset computer

0022 ~~Dredging resumes~~

MCM removes full shuttle

0035 Resume dredging

01:17 Stop dredging to advance to station 60

01:22 Dredging resumes

01:35 Dredging stops to adjust working curtain

01:45 Dredging resumes

2:10 Dredging Stops to change out shuttle

2:20 Dredging resumes

2:43 Advance to Station 65

3:44 Dredging stops to change out shuttle

3:52 Dredging resumes

4:51 Dredging stops to change out full shuttle

5:06 Dredging resumes

5:46 Dredging stops to shift barge

5:48 Dredging resumes

6:20 D. Russell and EC Ken depart for water download

EC Skip on board barge

6:25 Water level before and after download 36'4"

6:28 EC Ken + D. Russell on barge, empty shuttle in place next to dredge and dredging stops to switch out shuttles

6:35 Dredging resumes EC Skip departs

6:38 EC Ken departs barge to transition with EC Jim

8/15/07

6:40 Dredging stops to fix cable on crane — DR

6:45 D. Russell departs barge to transition shift with E. VanWagoner — DR

6:50 Depart bay for MCM yard — DR

7:05 Arrive at MCM yard and finish paperwork

7:45 Depart Yard. END of Shift — DR

Diane Russell

rane — DL
ition shift
DL
DL
sh paperwork
DL

8/15/07

23:00 D. Russell arrives at Tannery Bay — DL
23:05 Transition Shift with A. Davis — DL
23:10 Arrive on barge. Currently dredging at Station 125 — DL
23:43 Dredging stops for shift change — DL
23:55 Dredging resumes — DL

8/16/07

00:13 Dredging Stops, shuttle full — DL
00:45 Empty shuttle in place, dredging resumes — DL
1:29 Advance barge to station 140, dredging stops — DL
1:32 Dredging resumes — DL
1:47 Dredging stops, shuttle full and empty shuttle in place, secondary clear of sediment — DL
1:55 Dredging resumes — DL
2:53 Dredging stops, shuttle full — DL
3:11 Empty shuttle in place, secondary containment clear of sediment — DL
3:13 Dredging resumes — DL
3:40 Lightning observed in the distance, Weston, MCM and Enviracon agree ok to dredge — DL
3:42 Dredging resumes — DL
4:20 Shift barge to station 148 — DL
4:45 Dredging stops to change out shuttle — DL
4:55 Dredging resumes — DL
5:22 Dredging stops to reset curtain — DL
5:45 Dredging resumes — DL
6:15 EC Ken and D. Russell depart barge to download water levels — DL
6:20 water level before and after download: 24½"
6:25 EC Ken + D. Russell return to barge, EC Jim on board
6:27 Dredging stops to switch shuttles — DL
6:38 Dredging resumes — DL
6:55 Dredging stops to advance DL but wind is

8/16/07

too strong to pull barge ahead with crane.
Waiting for tug boat
7:05 Tug arrives to help push barge forward to station 158
7:12 Dredging resumes
8:10 Dredging stops to change out shuttle
8:20 Dredging resumes
8:38 Transition shift with E. Vanlerberg
8:45 Depart bay for MCM Yard
9:00 arrive at Yard
9:45 Depart Yard END of Shift

8/16/07

23:00 D. Russell on Site at Tannery Bay

23:05 Transition shift with A. Rains - MCM just moved to Dredge Lane 8A

23:10 D. Russell on barge and MCM currently changing bucket cable line

23:55 Shift Change

8/17/07

00:00 Re-booting GPS on Crane computer

00:15 Dredging resumes

00:55 Dredging Stops to advance to station 21

00:57 Dredging Resume

01:20 Dredging stops to change to toothed bucket

01:40 MCM fixes bucket cable

01:50 Dredging resumes

03:04 Dredging stops to change out shuttles

03:18 Dredging resumes

04:03 Dredging stop to pivot barge

04:10 Dredging resumes

05:20 Dredging stops to change out shuttle

05:30 Dredging resumes

06:24 Dredging stops to shift barge to station 10

06:27 Dredging resumes

06:30 EC Ken & D. Russell depart barge to collect water levels EC Sk. on board & pick up EC Jim at dock

06:35 Before download 29" After download 29 1/2"

06:45 Drop off EC Jim at barge and transport EC Ken to dock

06:50 D. Russell back on barge

06:55 D. Russell departs barge to Transition shift with E. VanWagoner. MCM stops dredging to change out shuttle.

07:05 D. Russell departs Site for MCM Yard

07:15 Arrive at MCM Yard and finish paperwork

08:30 Depart MCM Yard. END of Shift

Dave Russell

8/18/07

22:40 D. Russell arrives on site at Tannery Bay

23:00 D. Russell arrives on barge, MCM currently dredging Dredge Lane 7A station 36. MCM is approaching dredge lane from the side moving towards 6A

23:14 Dredging stops to refuel crane

23:25 Dredging resumes

23:38 Dredging stops for shift change

23:45 Dredging resumes

8/19/07

00:25 Dredging stops to switch out shuttles

00:32 Dredging resumes

01:47 Dredging stops to shift barge

01:49 Dredging resumes

02:30 Dredging stops to change out shuttle

03:02 Dredging resumes

04:20 Dredging stops to Advance dredge to station 56

04:22 Dredging resumes

04:45 Dredging stops to change out shuttles

05:05 Dredging resumes

06:10 Dredging stops to switch out shuttles

06:15 EC Ken and D. Russell depart to download water levels

06:20 Before download: 34¼" After download: 33¾"

06:28 Return to barge. dredging resumes EC Skip on board

06:45 D. Russell departs barge to transition shift with A. Davis

07:00 Depart Tannery Bay. END OF SHIFT

Duane Russell

8/1

22:35 D

22:45 D. F dep La

23:02 Dre

23:05 Dr

23:20 Dre

23:28 Dr

23:42 Dre

23:52 Dr

8/

00:15 Dre

00:36 Dre

01:20 Dre

01:27 Dre

01:43 Dr

02:02 Dre

02:12 Dr

02:23 Dre

02:26 Dre

03:25 Dre

03:37 Dr

8/19/07

22:35 D. Russell arrives at Tannery Bay

22:45 D. Russell and EC Ken arrive on barge. EC Jeff departs. MCM currently dredging in Dredge Lane 6A Station 63

23:02 Dredging stops to shift barge

23:05 Dredging resumes

23:20 Dredging stops to refuel crane

23:28 Dredging resumes

23:42 Dredging stops for crew change

23:52 Dredging resumes

8/20/07

00:15 Dredging stops to change out shuttle

00:36 Dredging resumes.

01:20 ~~Dred~~ Shift barge

01:27 Dredging stops, bucket tag line broken

01:43 Dredging resumes

02:02 Dredging stops to switch out shuttles

02:12 Dredging resumes

02:23 Dredging stops to Advance to station 45

02:26 Dredging resumes

03:25 Dredging stops to change out shuttle

03:37 Dredging resumes

05:35 Dredging stops to change out shuttle

05:55 Dredging resumes

06:10 EC Ken and D. Russell depart barge to download water levels

06:15 Before Download: 35 1/2" After Download: 36"

06:20 EC Ken and D. Russell Return to barge

6:30 Dredging stops to move barge

6:35 Dredging resumes

6:45 A. Davis on dock. D. Russell departs barge to transition with A. Davis & departs for MCM yard to finish paperwork

7:00 Arrive at MCM yard

7:15 Depart Yard End of Shift

Diane Russell

8/21/07

7:55 D. Russell arrives at MCM Yard to collect water data logger

8:05 D. Russell departs to collect water levels

8:15 D. Russell arrives at Tannery Bay

8:25 Arrive at stillwell and water level recorded before download 38" After download 37¾"

8:40 Depart Tannery Bay to download water level data at MCM Yard.

8:50 Arrive back at MCM Yard to download water level data and update dredge log

9:45 Depart MCM Yard to collect aerial photographs of Tannery Bay

12:00 Return to MCM Yard to download photos

13:45 D. Russell and C. Lantinga depart Tannery Bay to collect life jackets

16:15 Return to Tannery bay

16:25 D. Russell observes shoreline restoration. Crew currently stopped pumping to change pipe.

16:40 Resume pumping

17:45 Crew switches to second shore sock

18:50 D. Russell departs site to get some food

20:00 Back on site & take pictures of finished filled socks. Crew cleaning up & finishing last of stakes

20:15 D. Russell departs site, END of Day

Diane Russell

Yard to collect
t water levels
Bay
r level recorded
After download 37¾"
nload water level
to download
late dredge log
llect aerial
Bay
download photos
depart Tannery
restoration.
ng to change
shore sock
food
of finished
finishing last of stakes
of Day

8/22/07

8:30 D. Russell arrives at MCM Yard to download pictures

~~9:00 D. Russell arrive~~

8:45 D. Russell departs MCM yard to download water levels

9:00 D. Russell arrives at Tannery bay + communicates with EC Derrick to get a boat

9:25 Download water levels. Before and after water-level: 33¼ inches

Observed MCM crew finishing tearing down one shuttle and bringing offloaded shuttle over to linkbelt barge to be dissassembled. Whitelakes crew over at No. 56 to ~~offload~~ decon equipment

9:30 Depart Tannery Bay for MCM Yard to download water levels.

9:45 Arrive at MCM Yard to download waterlevels

10:25 Depart MCM yard for Tannery Bay

10:35 Arrive at Tannery bay and Shoreline restoration crew is continuing to pack up equipment before beginning live staking.
Observe MCM taking apart wood on shuttle and dipping the boards in the bay (No working curtain around dipping spot) and stacking the "clean" boards on the dissassembled shuttle.

10:55 D. Russell spoke with MCM Bob Everit about deconing procedure and he explained that that is what he was told to do - to clean the shuttle in the bay and rinse the boards as not to transport any contamination through the locks. The boards will then be rinsed again at the yard and then burned

8/22/07

11:00 Observe whitelakes cleaning off their shuttle at No. 56 (offloading)

11:45 Observe whitelakes hosing off shuttle barge at No. 56

12:00 D. Russell departs Bay for lunch

13:00 D. Russell returns - restoration crew still loading equipment and preparing for live staking
MCM is loading working curtain onto barge
EC Jim ison board MCM barge

13:25 Shoreline crew begins live staking

14:40 MCM stops decon work due to rain. Crew departs bay

16:20 Shoreline crew finishes live staking. Whitelakes continues to clean off shuttle by dumping buckets of water on shuttle

16:45 Whitelakes ends work.

17:00 D. Russell departs Tannery Bay - end of day

Diane Russell

8/23/07

8:15 D. Russell arrives at Tannery Bay for water levels MCM on site and Whitelakes on site - Foggy

9:15 D. Russell arrives at Weston Trailer to download water logger - Not working

9:30 Depart Weston trailer for Tannery Bay

9:45 D. Russell arrives at Tannery Bay - MCM still working on loading equipment to transport to yard and whitelakes continuing to decon shuttle

Also observe Northwoods doing Survey. Spoke with EC Horm and EC Jim and they said Northwoods was on site before 7:00. Contact A. Dickenson to inform them of Northwoods presence.

10:00 D. Russell arrives at stillwell to download water levels. Before and after download water level at 33 1/4 inches

10:30 A. Dickinson arrives on site to talk to survey crew

10:45 Speak with Doug with Northwoods and they are about to break for an hour and will meet D. Russell at 12:00 on Site

11:00 D. Russell and A. Dickenson depart Bay for MCM yard

11:15 Arrive at MCM yard to download waterlevels

12:00 D. Russell departs MCM yard for Bay

12:15 Arrive at Tannery Bay + meet Doug from Northwoods to resume Survey
Observe whitelakes continuing to decon shuttle and MCM is pulling out equipment to No. 56

12:30 Northwoods resumes Survey

13:05 Drummond Islander arrives to take out dump scow and MCM equipment

13:35 Scow departs Bay

14:20 MCM begins taking out Turbidity Curtain

15:20 MCM begins pulling out fuel barge

8/23/07

15:35 MCM stores fuel barge at Reeses Coal dock

16:15 Northwoods finishes survey and packs up equipment.

16:25 D. Russell departs for MCM yard

16:35 D. Russell arrives at MCM yard

17:00 Depart MCM yard END of DAY

Diane Russell

8/27

07:45 D. Ru

7:50 D. Russ

8:00 D. Rus

8:15 Surve

8:55 observ. dock

2:18 North

3:30 North

17:00 and S

7:05 D. Rus

8/27/07

Coal dock does up

07:45 D. Russell arrives at MCM Trailer

07:50 D. Russell departs MCM Trailer for Tannery Bay

08:00 D. Russell arrives at bay

08:15 Survey begins at Survey point B1

10:55 observe MCM picking up turbidity curtain from Coal dock shore

12:18 Northwoods and D. Russell off site for lunch

13:30 Northwoods and D. Russell on site and resume survey

17:00 Survey finished for day at point V48

17:05 D. Russell departs Bay - END of DAY

Diane Russell

8/29/07

8:40 D. Russell arrives at MCM yard to finish expense reports. Northwoods not Surveying

10:15 D. Russell departs MCM yard. END of Day

Diane

Russell

8/29/0

07:30 D. Ru
comm
North
Sur

07:55 North
Point

0:25 North
bay
stop

11:30 Surv

12:40 D. Ru
North

12:50 Surv

14:50 North
equip

15:00 D. R
Supe

15:53 D. Russ
with
files

16:20 D. Ru

8/29/87

07:30 D. Russell arrives at Tannery Bay to commence Survey with Northwoods Surveying Northwoods Setting up equipment for Survey.

07:55 Northwoods resumes Survey at Survey Point 671.

10:25 Northwoods finishes survey point lines across bay and commences collecting toe of slope data along shoreline

11:30 Survey stops for lunch

12:40 D. Russell arrives back on site and Northwoods is prepping for survey

12:50 Survey resumes at Survey point 771

14:50 Northwoods finishes Survey and packs up equipment.

15:00 D. Russell departs bay to pick up office supplies

15:53 D. Russell arrives at McMillan yard to help with demobalization and gathering of files

18:20 D. Russell departs Site. END of DAY

Diane Russell

8/30/07

0630 D. Russell arrives at MEM Yard to help with demobalization and organizing picture files for project for 2006 and 2007

18:30 D. Russell departs site

Diane

Russell

8/3

07:10 D.

Fin

3:30 De

13:00 Re

org

5 00 D.

MC

Ca

5 45 Re

Pa

8/31/07

07:10 D. Russell arrives at MCM yard to finish organizing 2007 photo file.

12:30 Depart MCM Yard to pick up lunch

13:00 Return to MCM Yard to continue organizing 2007 photo file

15:00 D. Russell and C. Cantunga depart MCM Yard to return Hertz rental car

15:45 Return to MCM Yard to finish copying paperwork for files

18:00 D. Russell departs MCM Yard.

END OF DAY

Diane Russell

BYE BYE CANNELTON

PARTING IS SUCH SWEET SORROW.

83°F sunny
light-med wind NW

34

8/13/07

1200	Andy Fans logging in this logbook now. Arrive at Weston trailer to review HASP and site procedures and operations with Chris Lantigua.
1330	Arrive at dock waiting for Andy & Elmer to pick me up and review operations.
1340	In transit with Andy & Elmer to MCM barge.
1450	Currently dredging @ Dredge Lane 4A. 2+00
1455	Water Level at 600.1
	Encountering a lot of wood while dredging
1500	SHIFT CHANGE WITH ELMER. NORM on BARGE
1514	SHUTTLE FULL, WAITING FOR EMPTY.
1545	EMPTY SHUTTLE IN POSITION, CONTINUE DREDGING
* 1550	RIVER CURTAIN OPEN, CHANGING SCOW.
* 1645	SCOW changing completed, river curtain closed.
1740	STOPPED DREDGING TO PIVOT DREDGE TOWARD THE ~~East~~ North, SO THAT WE CAN DREDGE CORNERS.
1743	CONTINUED DREDGING, STILL A LOT OF WOOD DEBRIS
1800	TRANSPORT A. Keil to dock
1810	Stop dredging waiting for tugboat to transport full shuttle. Tugboat needs hydraulic fluid, crew ~~retrieves~~ member going to get the needed fluid.
1850	Tugboat arrives at shuttle
1855	SHUTTLE EN ROUTE, WAITING FOR EMPTY SHUTTLE.
1900	WATER LEVEL AT 600.3. WAYNE (MCM) on board.
1930	SHUTTLE ARRIVES.
1940	CONTINUE DREDGING.
2010	STOP DREDGING, switching to tooth bucket
2025	CONTINUE DREDGING. Mostly wood debris.
2140	SHUTTLE FULL, WAITING FOR EMPTY.
2205	SHUTTLE ARRIVES
2210	CONTINUE DREDGING.
2240	PIVOT SOUTH
2300	Shift ending, change oversight.

80°F cl
light win

8/14/07

1450	A
	A
	At
	be
1535	Th
1540	On
	WA
1555	Co
	Ons
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	sig
1640	Sto
	For
1715	SHU
1820	Com
	To
	Also
	Lane
1900	Water
	pass
1930	LOAD
	WORK
1935	STAR
2005	NOW
2020	STOP
	TO S
2035	CONT
	MOST
2055	CRAW
	FINISH
2055	STOP
	SHUTTL
2110	CONTI

80°F cloudy
light wind

8/14/07 A Rains 152

1450 Arrive on barge, SHUTTLE ARRIVED EMPTY AND IS BEING LOADED.
At station 4A @ 235. Mostly wood debris being loaded.
1535 Moved FORWARD, pivoted North @ 230, stop dredging
1540 Onboard Chris L. and Robert/CRA
WATER LEVEL 600.9
1555 Continue Dredging. Chris L. and Robert/CRA ONSHORE.
1600 WEATHER UPDATE: Medium wind along with slight on and off rain.
1640 Stop dredging SHUTTLE FULL. WAITING FOR EMPTY SHUTTLE.
1715 SHUTTLE ARRIVES. CONTINUE DREDGING
1820 Completed dredging up to 240, Stop DREDGING TO REPOSITION DREDGING BARGE FOR NEXT CUT, ALSO WILL REPOSITION WORKING CURTAIN.
LANE 4A completed.
1900 WEATHER UPDATE: Medium wind, rain has passed, partly cloudy.
1930 LOADING EXCESSIVE FLOATING WOOD DEBRIS WITHIN WORKING CURTAIN.
1935 STARTED DREDGING AGAIN IN LANE 5A @ 0.0
2005 NOW DREDGING AT 35. WATER LEVEL 600.7
2020 STOP DREDGING TO CHANGE BUCKET FROM TOOTH TO SMOOTH CLAM BUCKET.
2035 CONTINUE DREDGING. DREDGING MATERIAL MOSTLY CONSISTS OF SILT/SAND.
2055 CREW WORKING ON SLOPE/BANK STABILIZATION SYSTEM FINISHED FOR TONIGHT.
2055 STOP DREDGING, SHUTTLE FULL, WAITING FOR EMPTY SHUTTLE.
2110 CONTINUE DREDGING LOADING EMPTY SHUTTLE.

2 of 2
36

8/14/07 A. RAVIS

CONT. 2110 NOTICED CRA CREW STILL WORKING ON shoreline.

2140 STOP DREDGING SHUTTLE FULL. WAITING ON EMPTY SHUTTLE.

2200 CRA crew finished working on shoreline for the night..

2215 Refueling BARGE CRAIN.

2240 Empty arrives, continue dredging.

2310 SHIFT CHANGE OVER.

82°F s
light w

8/15/07
1330
1445
1515
1600
1603
1605
1625
1725

~27° sunny
light wind

8/15/07 A. Rams

1330 Empty shuttle arrives, continue dredging.
Dredge Lane 5A @ 85
Water Level 600.7

1445 Stop dredging, shuttle full, waiting for empty shuttle.

1515 Empty shuttle arrives, continue dredging.

1600 Stop dredging to reposition working curtain.

1603 Continued dredging.

1605 Shuttle barge full, waiting for empty shuttle to arrive.

1625 Elmer Van Wagoner and I collecting turbidity samples.

– Inside turbidity curtain –

398 bypass this mark.

pt 397	N 46° 29.579'	28.0 NTU	600' elevation
	W 084° 23.360		
	100 Feet from MCM barge		
pt 398	N 46° 29.566'	30.8 NTU	604' elevation
	W 084° 23.328'	200 Feet from MCM barge	
pt 399	N 46° 29.683'	13.8 NTU	609' elevation
	W 084° 23.268'	heavily cleared near cyclones	
pt 400	N 46. 29.740'	2.41 NTU	600' elevation
	W 084. 23.335'	south of work barge	

– Outside turbidity curtain –

pt 401	N 46° 29.792'	1.55 NTU	617 elevation
	W 084° 23.393'	100' North of curtain	
pt 402	N 46° 29.803'	1.89 NTU	614 elevation
	W 084° 23.422'	200' North of curtain	
pt 403	N 46° 29.724'	1.66 NTU	604 elevation
	W 084° 23.454'	100' West of scow	
pt 404	N 46° 29.738'	1.19 NTU	593 elevation
	W 084° 23.469'	200' west of scow	

1725 Finished w/ turbidity readings.

ENT. 8/15/07 ATRAS

1725 Empty shuttle arrives, continue dredging.
1730 WATER LEVEL: 599.8
WEATHER UPDATE: clouds coming in, possible rain.
1750 Stop dredging due to low water level in bay.
1825 CONTINUE DREDGING, WATER LEVEL 600.2
1855 SHUTTLE FULL, STOP DREDGING, WAITING FOR EMPTY SHUTTLE.
1910 EMPTY SHUTTLE ARRIVES, CONTINUE DREDGING.
1955 SHUTTLE FULL, STOP DREDGING, WAITING FOR EMPTY SHUTTLE.
2025 EMPTY SHUTTLE ARRIVES, CONTINUE DREDGING
NOW DREDGING AT 106 in LANE 5A.
2100 NOW DREDGING AT 116 in LANE 5A.
2100 STOP DREDGING. ~~SHUTTLE FULL, WAITING FOR EMPTY SHUTTLE~~ AC. WATER LEVEL LOW. 599.7
2135 CONTINUE DREDGING.
2140 STOP DREDGING, WAITING FOR EMPTY SHUTTLE.
2150 CONTINUED DREDGING, EMPTY SHUTTLE ARRIVED.
2200 I was informed by Noam that the last load was "light" due to the low water levels.
2235 WATER LEVEL HAS GONE BACK UP TO 600.3
2245 STOP DREDGING, SHUTTLE FULL, WAITING FOR EMPTY SHUTTLE.
2300 SHIFT CHANGE, SHUTTLE ARRIVES, CONTINUE DREDGING

partly sunny
65°F
medium wind WNW

8/16/07 A. Rans

1045 Arrive at dock waiting for transport to barge.

1100 Arrive at barge, crew waiting for empty shuttle

1145 SHIFT CHANGE FOR MCM/~~WORK CREW~~.

1150 Empty shuttle arrives, CONTINUE DREDGING in LANE 5A @ 158:
WATER LEVEL 600.1

1210 STOP DREDGING, moving FORWARD with the assistance of a tug boat.

1215 Continue dredging. now at 163

1305 SHUTTLE FULL, STOP DREDGING, WAITING FOR EMPTY SHUTTLE.

1415 Empty SHUTTLE ARRIVES, CONTINUE DREDGING.

1430 SHIFT CHANGE FOR EQUIPMENT, Norm onboard.

1530 STOP DREDGING, SHUTTLE FULL, WAITING FOR NEXT SHUTTLE.

1535 OPERATOR ABLE TO DRAGGE a couple more buckets onto current shuttle.

1540 STOP DRAGGING, SHUTTLE FULL, WAITING FOR next shuttle.

1555 SHUTTLE ARRIVES, STILL NOT DREDGING DUE TO computer problems in crane.

1605 Computer up and running again. BARGE moving FORWARD. LANE 5A @ 175, WATER LEVEL 600.7

1610 Continue DREDGING.

1611 Noticed turbidity curtain around work area needs repair, stop dredging.

1640 Turbidity curtain repaired. Computer on barge crane malfunctioning again, IT person repairing.

1645 All repairs made. dredging again, noticed ~~more~~ more wood debris being dredged.

2 of 2
40

CONT. 8/16/07 A. Rains

1750 SHUTTLE FULL, stop dredging, waiting for empty shuttle.

1800 Empty shuttle arrives, continue dredging.

1910 STOP DREDGING, LANE 5A complete. Moving to next location. SHUTTLE FULL. WAITING FOR EMPTY SHUTTLE.

1915 WATERLEVEL 600.3
WEATHER: light wind WNW, sunny.

2133 Moved to LANE 8A, turbidity curtain is in place, waiting for empty shuttle.
Empty shuttle arrives, continue dredging

2200 Shuttle arrives, continued dredging.

2215 stop dredging, ~~be~~ the holding line on barge crane frayed and needs to be repaired.
Crew repairing cable.

2305 End of shift. shift change.

8/17/0
1100
113
113
115
123
132
143
144
1446
1500
1800

62°F
partly cloudy
medium to moderate high winds

8/17/07 A. Rovis

1100	Crew changing buckets on dredge crane, Not dredging.
1133	Continue dredging.
1135	Stop dredging, meet crew shift change over.
1153	Continue dredging. WATER LEVEL 601.3. WATER is ROUGH, high white caps outside River curtain, and the water inside River curtain is also white capping but at a much lower rate.
1230	Stop dredging shuttle Full. Waiting for empty shuttle.
1325	Shuttle arrives, continue dredging.
1430	High winds, WATER CRASHING over top of River curtains and turbidity curtains.
1445	Stop dredging, shuttle Full. waiting for empty shuttle.
1448	Stop dredging until high winds die down.
* 1500	Elmer onboard and Bob (mem) onboard, to notify us that dredging is suspended until weather improves
* 1800	Work has been terminated for this shift due to weather within the bay area, as per Bob Everitt.

63°F
Calm

mostly sunny
8/15/07

A. Re.

0700	On MCM barge, waiting for crew to arrive. WATER LEVEL 600.4. Jim from Environcon on board.
0730	MCM ~~Jim~~ Jim on board. they will be placing all turbidity curtain back in its place. Curtain was moved from the previous days weather. Waiting for the rest of MCM crew.
~~0740~~	River curtain open; changing scows.
~~0840~~	Scow has been changed and River curtain placed and closed
0900	MCM crew now placing River turbidity curtain back in place, this operation may take a coupt of hours due to the amount of curtain that was displaced.
1000	MCM crew back on barge, MCM will finish replacing curtain when water levels rise. Not dredging due to mechanical problems with barge crane. Batteries are dead and need to be replaced.
1055	~~Sho~~ Empty shuttle barge arrives and is ready to be loaded. MCM will load when crane is fixed and running.
1130	MCM shift change. MCM brought new batteries. WATER LEVEL: 600.6
1205	Replacing working curtain around barge.
1240	Start dredging LAYL 30 & 10
1245	3 MCM workers working on turbidity curtain along river, placing it back in its original spot. MCM previous shift stayed to assist with the curtain.
1310	Dredging with a lot of wood debris recovery.
1350	Stop dredging, shuttle full, waiting for empty shuttle to arrive.

A. Ryan

CONT. 8/18/07 A. Ryan

1355 MCM Fixed turbidity curtain the best they could right now, low waterlevel is making it very difficult to move.
WATER LEVEL: 600.4

1430 Empty shuttle arrives, continue dredging: mostly wood debris.

1500 Shift change for Environcom, Jeff onboard.

1540 Stop dredging, shuttle full, waiting for empty shuttle.

1600 Empty shuttle arrives, CONTINUE DREDGING.

1620 Collecting turbidity readings w/ Elmer.

inside curtain	pt 405	N 46° 29.596'	36.0 NTU	elev. 603
		W 084° 23.376'	100' E of BARGES	
	pt 406	N 46° 29.516'	17.4 NTU	elev 614
		W 084° 23.338'	200' E of BARGES	
	pt 407	N 46° 29.668'	16.2 NTU	elev 613
		W 084° 23.258'	dredge channel near cyclones	
	pt 408	N 46° 29.766'	3.78 NTU	elev. 596
		W 084° 23.320'	south of water barge	
	pt 409	N 46° 29.751'	2.90 NTU	elev 602
		W 084° 23.390'	NW of 56	
outside curtain	pt 410	N 46° 29.787'	3.65 NTU	elev 601
		W 084° 23.405'	100' N of curtain	
	pt 411	N 46° 29.802'	3.42 NTU	elev 619
		W 084° 23.427'	200' N of curtain	
	pt 412	N 46° 29.742'	2.91 NTU	elev 608
		W 084° 23.440'	100' W of curtain	
	pt 413	N 46° 29.739'	2.23 NTU	elev 589
		W 084° 23.473'	200' W of curtain	

1700 Finished collecting turbidity readings.

1720 Stop dredging, shuttle full, waiting for empty shuttle to arrive.

1755 Empty shuttle arrives, CONTINUE dredging.

Cont 8/18/07 A. Ravi

1800 WATERLEVEL: 600.7

1835 Stop dredging, shuttle Full, waiting for empty shuttle.

1900 End of shift for Westen.

.5°
calm winds
partly cloudy

WL - White Lakes
MCM - MCM
SR - Shoreline Restoration

8/19/07

A. Davis

0630 On dock waiting for transport.
0650 White Lakes in transit to next area to be excavated and loaded into barge shuttle.
0710 MCM loading barge shuttle. Lance 7A C 56
WATER LEVEL 600.8
0715 WL shuttle full, stop dredging, waiting for empty shuttle to arrive.
0745 WATER LEVEL. 600.3
0755 MCM shuttle full, stop dredging waiting for empty shuttle.
0800 WL empty shuttle arrives continue dredging.
0810 MCM empty shuttle arrives continue dredging.
0815 SR Shoreline Restoration continuing since about 0700 this morning.
0845 WL shuttle full, stop dredging, waiting for empty shuttle.
0925 WL empty shuttle arrives, continue dredging.
0930 MCM shuttle full, stop dredging, waiting for empty shuttle
0940 MCM shuttle arrives, continue dredging
0950 WL shuttle full, stop dredging, waiting for empty shuttle.
1025 WL empty shuttle arrives, continue dredging
1055 WL shuttle full, stop dredging, waiting for empty shuttle.
1110 MCM shuttle full, stop dredging, waiting for empty shuttle
1200 MCM empty shuttle arrives, continue dredging
1235 WL empty shuttle arrives, continue dredging.
1255 MCM shuttle full, stop dredging, waiting for empty shuttle.
1310 WL shuttle full, stop dredging. waiting for empty shuttle.

A. Bari

CONT. 8/19/07

1320 WATER LEVEL: 600.2 weather sunny, light wind

1405 MCM empty shuttle arrives, continue dredging.

1433 WL empty shuttle arrives, continue dredging.

1510 MCM dredged up to C2 in lane 7A.

1520 MCM shuttle full, stop dredging, waiting for empty shuttle to arrive

1526 WL shuttle full, stop dredging, waiting for empty shuttle to arrive.

1530 SR Observed blue-line Restoration crew, no problems or issues to report.

1600 MCM empty shuttle arrives, continue dredging.

1620 WL empty shuttle arrives, continue dredging.

1700 WL shuttle full, stop dredging, moving forward and setting up for tomorrows dredging area.

1715 MCM shuttle full, stop dredging waiting for empty shuttle.

1755 MCM empty shuttle arrives. continue dredging.

1830 WL Whitehaven finished shift for today.

1833 MCM Jeff (Evergreen) confirmed that Lane 7A was completed @ 1500 and they are now dredging Lane 6A.

1850 shuttle full, stop dredging, waiting for empty shuttle

1900 End of field work, en route to MCM dock office.

CONT 8/20/07 A. Ravis

1410 MCM Shuttle Full, stop dredging, LMWG 6A completed.
1420 WL Shuttle Full, stop dredging, waiting for empty shuttle.
1430 MCM Starting decon of their equipment
1610 WL Empty shuttle arrives, continue dredging.
1645 WL Shuttle Full, stop dredging, waiting for empty shuttle.
Material being dredged mostly contains wood debris.
1830 WL Empty shuttle arrives, continue dredging.
1905 WL Shuttle Full, stop dredging, waiting for empty shuttle.
1940 WL Empty shuttle arrives, continue dredging
2000 MCM End of work day for MCM barge.
2015 WL Shuttle Full, stop dredging, waiting for empty shuttle.
2035 WL Empty shuttle arrives, continue dredging
2115 WL Shuttle Full, stop dredging.
2210 WL End of work day for Whitlatches. A. Ravis en route to office at MCM docks.

72°F
Calm

WL - White Lakes
MCM - MCM
SR - Shoreline Restoration

A. Ellis

8/21/07

0630 At dock helping transport White Lakes crew to barge.

0635 WL Empty shuttle at barge, continue dredging.
WATER LEVEL 600.0

0715 WL Shuttle Full, stop dredging, waiting for empty shuttle.

0720 MCM MCM board their barge and continue de-con on their shuttle barges.

0730 SR Shoreline Restoration work continuing where they left off at yesterday.

0755 WL Empty shuttle arrives, continue dredging.

0815 WL Shuttle Full, stop dredging, waiting for empty shuttle.

0830 loaned out Weston's boat to CRA because their boat battery was dead.

0845 WL Empty shuttle arrives, continue dredging.

0950 WL Shuttle Full, stop dredging, waiting for empty shuttle.

1000 WL Empty shuttle arrives, continue dredging

1055 WL Shuttle Full, stop dredging, waiting for empty shuttle

1100 CRA Finished using Weston's boat.

1100 WL In transit to next location (Hot spot).

1108 WL New spot, loading new maps into GPS to find exact location for dredging.

1125 WL Area located, barge positioned. Crew setting silt curtain in to place.

1130 WATER LEVEL: 599.8, southeast wind, medium

1240 WL Curtain in place, start dredging hot spot.

1300 WATER LEVEL: 600.0

1315 WL Shuttle Full, stop dredging, waiting for empty shuttle

1340 WL Empty shuttle arrives, continue dredging.

A. Davis

cont. 8/21/07

1400 MCM Still decon equipment, barge.

1405 WL Shuttle Full, stop dredging, waiting for empty shuttle.

1405 SR Duane Russell performing oversight for crew.

1440 WL Empty shuttle arrives, continue dredging.

1530 WL Shuttle Full, stop dredging, waiting for empty shuttle. While I left crew readjusting silt curtain.

1555 WL Empty shuttle arrives, continue dredging.

1610 WL Was informed by operator that the area being dredged seems to have a rocky base.

1620 WL Shuttle Full, stop dredging, waiting for empty shuttle.

1630 BACKLOG: MCM crew finished @ 1530

WL 1650 Empty shuttle arrives, continue dredging.

WL 1725 Shuttle Full, stop dredging, waiting for empty shuttle

WL 1750 Empty shuttle arrives, continue dredging

WL 1825 Shuttle Full, stop dredging, waiting for empty shuttle.

1855 WL Empty shuttle arrives, continue dredging

1950 WL Shuttle Full, stop dredging. LAST SHUTTLE.

2030 WL Crew and I heading back to shore, end of work day for Whitehurses. A. Davis en route to office at MCM dock.

80's
WIND ⓪

LN 3A STAT 10~~7~~7 8/6/07

5:30 ARRIVED ON BARGE. DISCUSSED OPERATION W/ ANDY. ANDY GONE @ 4:30PM.

15:45 EMPTY BARGE SET W/ CLAM

16:48 EMPTY BARGE IN POSITION. CLAM BUCKET IN WATER

16:05 RAISING SPUDS.

16:11 DOWN TO REPLACE BOLTS ON CLAM BUCKET. TAG LINE CHAIN CAME LOOSE.

16:14 BACKUP & RUNNING.

17:40 BARGE FULL

18:26 EMPTY BARGE IN PLACE

18:33 START FILLING SCOW

18:55 BACK FROM TOUR OF DREDGE 56 W/ CHRIS, ANNETTE, ANDY & MYSELF. CURTAIN @ NE CORNER OF RIVER PULL AWAY FROM SHORE x 10'.
• WAYNE HERE FROM MCM

19:15 AT STATION 122 (LANE 3A)

19:30 BARGE FULL WAITING FOR EMPTY BARGE.

20:20 EMPTY BARGE HERE.

20:25 STARTED LOADING BARGE.

21:13 BARGE LOAD - WAITING FOR TRANSPORT.

8/6/07

21:39	EMPTY BARGE HERE BEING STAGED
21:42	NEW BARGE IN POSITION & LOADING
22:17	122 → 135 ADVANCE 13'
22:30	LOADED
22:35	FUELING CRANE
22:55	EMPTY SCOW IN ~~[illegible]~~ BEING STAGED
23:00	SCOW IN POSITION TO LOAD

SE
80-
NICE
8/7

15:0
15:4
16:3
16:5
17:0
17:3
17:3
17:4
17:5
17:5
17:5
18:02
18:13
18:29
18:3
18:39
18:40
19:25
19:35
19:51
20:0
20:5
21:0
21:10
21:5
22:1

SE WIND
80-85 °F
NICE ON MCM BARGE - HOT ON SHORE.

SHUTTLES: IIII

8/6/0

8/7/08 STATION 145 - WAITING FOR SHUTTLE

TAGED
ING

15:00	BEAUTIFUL DAY - RELEAVED ELMER VAN WAGNER. LOW WATER (599.9) SHUTTLE WAITING USING SMALL BUCKET ON CRANE
15:42	DREDGING
16:34	SHUTTLE FULL - NO EMPTY SHUTTLE READY WAITING FOR SHUTTLE
16:55	EMPTY SHUTTLE STAGED
17:00	DREDGING AGAIN.
17:30	CRANE COMPUTER BECAME UNPLUGGED
17:32	DREDGING AGAIN.
17:49	CRANE COMPUTER BECAME UNPLUGGED
17:54	DREDGING AGAIN.
17:56	REPOSITIONING BARGE
17:58	DREDGING - (600.6 FT. WATER)
18:02	PIVOT (EAST)
18:13	SHUTTLE FULL - WAITING FOR EMPTY SHUTTLE.
18:29	EMPTY SHUTTLE STAGED
18:34	DREDGING
18:39	BLEW GFI OUTLET ON GENERATOR PLUGGING IN LAMP THAT GOT WET... SHUTDOWN CRANE COMPUTER
18:40	DREDGING
19:25	AT 175 STATION - GETTING CLOSE TO END OF LANE 3A - MAYBE BY MORNING.
19:35	SHUTTLE FULL - WAITING FOR EMPTY SHUTTLE
19:51	EMPTY SHUTTLE STAGED
20:00	DREDGING AGAIN
20:56	SHUTTLE FULL - WAITING
21:05	EMPTY SHUTTLE STAGED @ 184
21:10	DREDGING
21:55	SHUTTLE IS FULL - WAITING
22:15	EMPTY SHUTTLE STAGED
22:21	DREDGING

ING

STARTS RAINING ABOUT 21:40

26

8/7/07

22:23 WATER @ 600.4'

22:47 @ STATION 194

NW W1
Coast 8

8/8/07

15:00

15:05

15:15

15:30

16:00

*16:10

16:53

18:00

18:45

NOTE

19:37

Cont' 80s

8/8/07 1 OF 2

15:00 @ STATION 77 IN LANE 4A.
15:05 LITTLE TUG OUT OF FUEL ... CAPT. BOB FILLING W/ NO SMILES.
WAITING FOR TUG TO PLACE EMPTY BARGE IN POSITION.
15:15 LITTLE BARGE REFUELED & SHUTTLING WHITE LAKE SHUTTLE TO OLD 56.
15:30 DREDGING
TURBIDITY CURTAIN ON ST. MARY'S RIVER OPEN TO CHANGE OUT SCOW.
16:00 TURBIDITY CHECKS

PT366	N	46°	29.554	W	84°	23.374	19.3 NTU
PT367	↓	↓	.617	↓	↓	.236	19.6 NTU
PT368	↓	↓	.744	↓	↓	.312	6.76 NTU
PT369	↓	↓	.767	↓	↓	.417	1.84 NTU
PT370	↓	↓	.787	↓	↓	.465	2.09 NTU
PT371	↓	↓	.795	↓	↓	.389	1.61 NTU
PT372	↓	↓	.818	↓	↓	.410	1.61 NTU

*16:10 SHUTTLE FULL – WAITING
16:53 STILL WAITING FOR SHUTTLE
18:00 MET CHRIS L. @ DOCK & WENT BACK TO HAMPTON TO P/U DRAWING & SPECS FOR ANOTHER JOB.
18:45 • RETURNED TO BARGE
• CHANGING BUCKET ON MCM CRANE WHEN I GOT BACK, PER ENVIROCON LOG THIS STARTED @ 18:38.
NOTE • MCM SMALL REFUELING SHUTTLE (AL. BOAT W/ 25 HP JOHNSON OUTBOARD) DOESN'T RUN. MCM IS TOWING IT AROUND W/ ANOTHER SKIP TO REFUEL SHUTTLE TUG ET. AL.
19:37 DREDGING

8/8/07

20:09 SHUTTLE FULL
20:47 EMPTY SHUTTLE IN PLACE
TAG LINE ON CRANE BROKE
21:22 DREDGING AGAIN
21:50 LOST LARGE SPOT LIGHTS ON BARGE
COMPUTER ON CRANE OK. WAITED FOR
LAMPS TO COOL DOWN... TURN CIRCUIT
BREAKERS BACK ON STILL SOMETHING WRONG
22:00 SHUTTLE FULL - WAITING.
22:05 CYCLED POWER ON "NIGHT HAWK" LIGHT
GENERATOR & LIGHTS CAME BACK ON.
22:45 DREDGING AGAIN

SE WIND
80°F

SHUTTLES: 111

29

2 OF 2

8/9/07 @ STATION 122 1 OF 2

ENVIROCON HERE

14:50 ARRIVED ON DREDGE - WATER LEVEL 600.3
WAITING ON SHUTTLE

15:02 SHUTTLE IN PLACE - DREDGING.

15:09 1ST BUCKET

15:50 SHUTTLE FULL - WAITING FOR EMPTY. ①

16:00 CHRIS L. & BOB (CRA) WERE HERE. TOURED IN BOAT TO LOOK @ SHORE LINE RESTORATION WORK

16:30 CHRIS & BOB (CRA) LEFT.

16:36 · TALK TO ANDY (WHITELAKE) & WE'LL TAKE TURBIDITY READINGS @ 16:45
· MCM CHANGING OUT DUMP SCOW SHORTLY.

17:55 RETURNED FROM TAKING TURBIDITY CHECKS, AS FOLLOWS:

PT 373 N46° 29.585' W084° 23.371' 42.2 NTU
16:55 HRS MCM STARTED MOVING THE FIXED TURBIDITY CURTAIN FOR DUMP SCOW CHANGE-OUT

PT 374	.629	W	.248	9.17 NTU
PT 375	.743	W	.303	3.00 NTU
PT 376	.810	W	.364	1.61 NTU

17:10 HRS HAD TO RE-CAL TURB. METER... HAD NEGATIVE READING. STOP MEASUREMENTS & RECAL ON SHORE. FOLLOWING ARE THE LAST TWO READINGS. (PT 377 → 379 DISREGARDED)

PT 380	.796	.399	1.74 NTU
PT 381	.817	.436	0.69 NTU

18:03 SHUTTLE CHANGED OUT @ 17:46 - WAITING FOR EMPTY SHUTTLE ②

18:26 EMPTY SHUTTLE ARRIVED

18:27 DREDGING

79°F Calm

30

8/9/07 CONT.

2 OF 2

18:45	DOWN FOR MAINT. ON #1 SPUD - BROKEN CABLE. USING CRANE TO MAKE REPAIRS.
19:15	#1 SPUD CABLE REPAIRED.
19:19	DREDGING AGAIN
19:50	SHUTTLE FULL - WAITING FOR EMPTY (3)
20:24	EMPTY SHUTTLE ARRIVED
20:26	DREDGING AGAIN
20:44	BROKE BUCKET CLOSING CABLE - DOWN ACTUALLY THE CABLE IS THE MAIN DRUM CABLE. WE HAD SPARE CABLE ON BARGE. ASSISTED INSTALLING SPARE CABLE.
21:35	CABLE REPAIRED - HOPEFULLY ITS LONG ENOUGH WHEN DREDGING STARTS.
21:45	DREDGING @ STATION 122
22:02	SHUTTLE FULL - WAITING FOR EMPTY (4)
22:37	EMPTY SHUTTLE IN POSTION
22:38	DREDGING

84°F
NW W

8/10/07

14:50	
14:58	
15:30	
15:33	
16:00	
16:30	
16:50	
17:28	
17:30	
18:50	
19:00	
*19:05	
19:25	
19:52	
*20:13	

VW WINC

① STATION 51

2 OF 2 | 8/10/07 | 1 OF 2

14:50 ARRIVED ON BARGE

MAKE 14:58 SHUTTLE FULL - TRANSFERING ①

15:30 EMPTY SHUTTLE ARRIVED

15:33 DREDGING

16:00 TURBIDITY CHECKS w/ MNDY - A LITTLE ROUGH OUT IN THE RIVER

③

PT 382	N 46° 29.578'	W 084° 23.332'	20.7 NTU
383	.630'	.242'	20.2
384	.745	.303	7.63
385	.798	.376	1.73
BLE 386	.799	.426	1.57
387	.777	.457	1.28
388	.755	.452	1.86

16:30 BACK FROM TURB. CHKS.
CRANE STILL LOADING A LOT OF WOOD.

16:50 FULL SHUTTLE - LOTS OF WOOD & ②
④ WATER IN SHUTTLE. WAITING FOR EMPTY.

17:28 EMPTY SHUTTLE ARRIVED

17:30 DREDGING

18:50 SLOW GOING - DREDGING UP LOTS OF WOOD.
WATER @ 600.6'

19:00 PREPING FOR SCOW CHANGE.

*19:05 OPENING RIVER CURTAIN

19:25 • SHUTTLE WAITING FOR CHANGE OUT IS FULL OF WATER & WOOD. MCM IS USING SUMP PUMPS TO KEEP THE WATER IN THE PIG PEN.
• TUG ARRIVED & IS IN THE PROCESS OF CHANGING OUT SCOW.

19:52 SCOW TUG LEAVING

*20:13 RIVER CURTAIN CLOSED

8/10/07 2 OF 2

20:39 FULL SHUTTLE BEING MOVE - FINALLY!

21:51 WAYNE (MCM FOREMEN) FINALLY WENT TO SCOW TO PICK UP AN EMPTY SHUTTLE. NOT MUCH HAPPENING TONIGHT. STILL @ STATION 162.

22:10 EMPTY SHUTTLE HERE.

22:12 DREDGING

09:59
10:02
10:49
10:53

Cloudy
75°F

2 OF 2

SHIT

NIGHT.

8/11/07

1 OF

06:50 ARRIVED - @ STATION 178
07:00 SKIP WAS HERE & WASN'T HAPPY ABOUT MCM SHUTTING DOWN @ NOON TODAY!
07:19 LOW WATER - BARGE GROUNDED (600.1). NOT DREDGING.
07:50 • WATER LEVEL BACK UP TO 600.4 -
• CHRIS L. CALLED & SAID TO GO HOME AFTER MCM DONE TODAY.
• DREDGING AGAIN
08:26 WATER @ 600.9'
08:46 • WATER @ 601.1'
• STILL DREDGING LOTS OF WOOD... SLOW GOING.
09:28 SHUTTLE FULL - WAITING FOR EMPTY ①
09:52 RETURNED FROM TAKING TURBIDITY CHECKS AS FOLLOWS:

PT 389	N46° 29.566'	W084° 23.365'	17.3 NTU
390	.628	.247	7.19 NTU
391	.742	.308	3.06 NTU
392	.794	.410	3.26 NTU
393	.802	.440	1.75 NTU
394	.792	.495	3.07 NTU
395	.756	.459	1.89 NTU

09:59 WATER GOING OUT AGAIN - 600.3'
10:02 DREDGING AGAIN
10:49 LOW WATER - STOPPED DREDGING (599.8)
10:53 GENERATOR SHUTDOWN FOR THE DAY.

Kelly Hudson
7/20/07
3-11 shift
windy, 60s

1630 Arrive at dock with C. Lantinga. Met with.
A. Kiel to go to MCM barge. KBH
1638 Arrive on MCM barge. Given directions on daily routine
1701 Dredging stopped due to shuttle change-out
Dredging in DMU-12, @ 141 KBH
1737 Start dredging operations again. KBH
1750 A. Kiel stopped by so that I could take him ashore
and keep the boat. KBH
1758 Water level = 600.9 ft. KBH
1808 Moving the spuds and pivotting SW KBH
1833 Dredging stopped due to shuttle change out
1909 Started dredging again. KBH
1920 Water level 600.45 ft KBH
1945 Crane is only reshifting sediment in shuttle - not
really dredging. Apparently the shuttle is stuck.
2025 Shuttle finally able to move. Shuttle change out
This will be the last one tonight. They have
to change a bearing on the crane on the water barge.
2052 Shuttle returned. Finished at 165 KBH
2100 Head back to the dock. KBH

KBH

Kelly Hudson
7/~~22~~ 23/07
Low 70's, clear, light-med winds

1300 Call from Vern (Envirocon) indicating equipment may be up and running soon.
1307 Vern indicated MCM started dredging at DMU-12 @ 161. Water level = 600.7 ft
1345 ~~1350~~ KBH K. Hudson on site at dock. Proceed to barge. Wayne from MCM on the barge (supervisor)
1422 Finish load. Stop dredging due to shuttle changeout. Fuller load due to non-saturated soils
1450 Start dredging again. KBH
1505 A. Kiel at dock to help with turbidity sampling
- pt 250 just outside work curtain
N 46° 29.568 W -84° 23.360 28.9 NTU
- pt 251 near White point dredging
N 46° 29.5~~68~~ 82 W -84° 23.258 9.73 NTU
- pt 252 in lane
46° 29.662 W -84° 23.245 10.45 NTU
- pt 253 by water barge
46° 29.748 N -84° 23.312 W 4.86 NTU
- pt 254 outside curtain 100 ft
46° 29.831 N -84° 23.308 W 1.60 NTU
- pt 255 outside curtain 100 ft W
46° 29.792 N -84° 23.404 W 1.72 NTU
- pt 256 outside curtain 200 ft W
46° 29.804 N -84° 23.436 W 1.79 NTU
- pt 257 outside curtain 200 ft
46° 29.853 N -84° 23.355 W 0.56 NTU
1545 Drop Andy off at dock KBH
1605 MCM brought in other shuttle and are changing out.
1638 Shuttle moving into place. Had to dig up a couple bucket loads to lower high points. There was rock and block. Operator moved loads into work curtain
1642 Start dredging again KBH
1730 Wayne offsite KBH

1746 Crane not
problems
1803 Back to
1815 Stop dredg
1829 Loaded sh
1837 Started
1905 Stop dred
Dredging
1920 K. Hudson

Kelly Hudson
7/21/07

Partly cloudy, mid 60s
light wind.

1746 Crane not operating. Apparently having computer problems — KBH

803 Back to dredging. — KBH

815 Stop dredging. Swap out shuttles — KBH

829 Loaded shuttle backing out. — KBH

837 Started loading again — KBH

905 Stop dredging - shuttle full. — KBH

Dredging completed to DMU-12 @ 173 — KBH

920 K. Hudson back to the dock.

KBH 0/0

KBH

Kelly Hudson
7/22/07
clear, low 70s, light wind

1340 Met A. Kid at dock. Discussed progress.
Met with Skip (Enviroscon) to discuss progress.
1427 Moving shuttle in next to barge. Straddling lane 3 and 4, starting at 0+63. MCM is going back over to remove the high spots. KBH
1440 MCM are moving the working curtain
1455 Drop off Andy at dock KBH
1508 Wayne and Wayne (MCM) off site. Crew still moving the working curtain KBH
1525 Norm and Skip off site KBH
1545 Norm back onsite from grabbing ~~lo~~ lunch
1550 A. Kiel at dock. Calibrate turbidity meter 10 std @ 9.85 NTU KBH
Were doing turbidity readings due to the boats moving curtain and kicking up sediment, not due to dredging KBH
1620 Drop Andy at dock. MCM using tugboat to move curtain instead of just their small power boats
1657 Crew start dredging KBH
Turbidity readings

- pt 258	46° 29.585 N	-84° 23.285 W	34.5 NTU
- pt 259	46° 29.635 N	-84° 23.248 W	14.5 NTU
- pt 260	46° 29.733 N	-84° 23.315 W	2.93 NTU
- pt 261	46° 29.834 N	-84° 23.323 W	1.11 NTU
- pt 262	46° 29.782 N	-84° 23.395 W	0.94 NTU
+ pt 263	46° 29.797 N	-84° 23.441 W	1.43 NTU
- pt 264	46° 29.859 N	-84° 23.367 W	1.44 NTU

1705 Water level = 600.6 ft, dredging at 0+66
1725 Moved to station 0+75 KBH
1835 The other shuttle moves in to be swapped. Still dredging
1838 Stop dredging. Swapping shuttles KBH
1845 Start dredging again. Still at station 0+75.
Water level = 600.0. Sandbar exposed to the north.

1900 Water level
1914 Finishing f
1917 Heading ba

Kelly Hudson
7/22/07
Clear, High 70s,
light wind.

1900 Water level = 600.2 ft. moved to station 0+81
1914 Finishing for the day.
1917 Heading back to the dock.

KBH

KBH

KBH

KBH

KBH

KBH

KBH

KBH

NTU
NTU
NTU
NTU
NTU
NTU
NTU

KBH

KBH

Kelly Hudson
7/23/07
Mostly sunny, High 70s
Light winds

1430 Met Elmer VanWagner at White Lakes barge
Discussed progress and schedule
1508 Drop E.V.W at White Lakes barge
Currently at station 1+25 between lanes 3+4
1520 Head out to do turbidity readings
1540 Pick up A. Kiel to help. Stop dredging to
change out shuttle (other in line to exchange)
1555 Start dredging again — KBH

- pt 265	46° 29.569 N	-84° 23.323 W	35.6 NTU
- pt 266	46° 29.551 N	-84° 23.~~240~~ 265 W	26.8 NTU
- pt 267	46° 29.653 N	-84° 23.~~321~~ 240 W	8.40 NTU
- pt 268	46° 29.774 N	-84° 23.~~332~~ 321 W	2.13 NTU
- pt 269	46° 29.832 N	-84° 23.~~423~~ 332 W	0.82 NTU
- pt 270	46° 29.778 N	-84° 23.~~442~~ 423 W	1.50 NTU
- pt 271	46° 29.824 N	-84° 23.~~330~~ 442 W	1.53 NTU
- pt 272	46° 29.857 N	-84° 23.330 W	0.87 NTU

1615 Return A. Kiel to White Lakes barge and go to MCM barge
1624 Water level = 600.5 ft — KBH
Note: Turbidity meter calibrated = 9.80 NTU for 100 std.
E.V.W indicated he inspected the silt curtain
(permanent) during his shift. — KBH
Note: Crew: Norm, Jim - Enviroscon
Bob, Mike, Danny - MCM (+ Craig)
1700 Stop dredging to move working curtain. I asked
Danny if he needed anything and he said some aspirin.
I checked the first aid kit in the trailer, and it is
lacking many things. May need to request resupply kits
1745 Drop A. Kiel off at dock. White Lakes still
dredging — KBH
1754 Noticed White Lakes stopped dredging. We are
still not dredging due to moving curtain.
Did a check on First aid kit. Most of the
bandages and a few other items are not here. As

Kelly Hudson
7/23/07 7
Mostly Sunny, High 70s
Light wind

	I was QC'ing, Norm came in and said he had another in his truck if we need to swap it out. I said that would be a good idea.
1803	Start dredging again. Still at station 1+25
1818	Stop dredging - pivot SW. KBH
1821	Start dredging again KBH
1858	Water level = 600.4 ft (mcm) KBH
1930	Wayne on the barge KBH
Note:	Earlier, Mike indicated he had got battery acid on himself and his clothes. I don't think he soaked his clothes. He washed his hands with dish soap and appears fine. This was about 1800. I called it into the trailer as a near miss at about 1930.
1940	Moving working curtain. Still dredging. Operator appears to mostly be sweeping the bottom looking for high spots. Danny said we're getting close to done.
Note	Jim left about 1800 KBH
Note	Norm indicated we had moved back again to fix a high spot, and were back to station 1+25
2005	Sun is setting, Norm cranks up the worklight. Shuttle moving into place to swap out. Still dredging.
2013	Stop dredging due to shuttle change out
2021	Start dredging again KBH
~~18~~ 2055	Turn on lights KBH
~~22~~ 2225	Currently at station 1+40. Norms notes say since 2041 KBH
2238	Other shuttle moving into place. ~~Still~~ Stop dredging.
2248	Start dredging again at station 1+40
2255	Stop dredging. Bucket jammed. KBH
2300	Start dredging. KBH
2312	Stopped dredging. Pinched electrical cord to crane.
2325	Picked up Diane Russell and Mike KBH
2335	I head to the dock KBH

KBH

Kelly Hudson
8 7/24/07

Sunny, low 80's, light wind

1428	Arrive at dock. E.V.W. taking turbidity readings	2120
	and will get me when he finishes	2140
	Skip (Envirocon) came to give me his boat.	2238
1448	Noticed not dredging. Swapping shuttles	
1457	Start dredging again ——— KBH	2245
	Call from Annette re: incident last night.	2300
	Asked her about overdredging authorization.	
	Ended up having a conversation with EVW and A. Kiel.	
	A. Kiel indicated I don't need to worry right now	2310
	because they have to overdredge, but will have to	2320
	monitor closely when we proceed north.	
1545	Left EVW at dock and went back to MCM barge	
	Water level = 600.4 ft Station 1+71	
	Crew: Envirocon - Norm, Jim	
	MCM - Bob, Mike, Danny, Craig	
1600	Stop dredging - need to fuel up. Bob indicated we	
	are back in lane 4 (BMU-12) and will probably	
	move to the north tomorrow. Other shuttle on its way	
1617	Swapping out shuttles. Still not dredging	
1627	Start dredging again ——— KBH	
1720	Take A. Kiel to shore. Norm back on barge.	
	Call from Annette indicating near miss.	
1738	Moving forward. Still dredging. In lane 4	
1741	Stop dredging - swapping shuttles	
1752	Start dredging again, Station 1+81, water = 600.2 ft	
1847	Stop dredging - shuttle full. Jim heading to dock.	
	Still unloading other shuttle ——— KBH	
1911	Wayne on barge now ——— KBH	
1941	Swapping shuttles - Still not dredging	
1947	Start dredging again ——— KBH	
2020	Back to dock. ——— KBH	
2050	Back on the barge. Still working on same shuttle	
	on station 1+90 ——— KBH	

Kelly Hudson
7/24/07 9
Dusk, mostly cloudy
70's, light wind

2120	Stop dredging. Call for shuttle change.
2140	Start to dredge again ——— KBH
2238	Moving to W/SW. Still dredging. Located in lane 4 (DMU-12) at 1+90. ——— KBH
2245	Norm headed to the dock ——— KBH
2300	Ken (Envirocon) on the barge ——— KBH
	Not dredging - working on equipment (fixing the bucket?). Need to change shuttles.
2310	Pick up Diane at dock ——— KBH
2320	Dropped off at dock ——— KBH

KBH

Kelly Hudson
7/25/07
Clear, 70's, light-medium wind

1510 Arrive at dock. EVW said we are at lane 1A Station 0+15. Met with A. Kiel to discuss dredging in this area. As it is deeper, there shouldn't be a need to over dredge. EVW said I need to do turbidity readings. KBH

1540 Drop A. Kiel at his barge. In the process, we moved east in lane 1A KBH

1555 Stop dredging due to back up on water barge. Need other shuttle. KBH

1600 Calibrate Turbidity meter @10.0 NTU (9.62 NTU)
Pick up A. Kiel. KBH

- pt 284	N 46° 29.567	W -84° 23.348	50.5 NTU
- pt 285	N 46° 29.618	W -84° 23.251	31.9 NTU
- pt 286	N 46° 29.748	W -84° 23.315	4.46 NTU
- pt 287	N 46° 29.834	W -84° 23.344	0.66 NTU
- pt 288	N 46° 29.796	W -84° 23.452	1.55 NTU
- pt 289	N 46° 29.832	W -84° 23.504	1.36 NTU
- pt 290	N 46° 29.858	W -84° 23.399	0.63 NTU

Inspected outer permanent curtain. Found two breaks and a couple points where curtain was tied up so only ~2 ft of curtain was beneath the water.

* 2nd H beam from west - break about 4 ft in width, observed cloudy water and fur coming out.
Turbidity = 11.70 NTU

* 2nd H beam from east - 2 smaller breaks, observed turbid cloud coming out
Turbidity = 7.48 NTU

1640 Drop A. Kiel at his barge. Still not dredging on MCM barge. Just as I arrive, Norm and Bob leave on tugboat. KBH

Danny indicated cannot work while curtain is open
I can see a tugboat near one of the breaks.
Drop off copy of WP to A. Kiel.

Kelly Hudson
7/25/07
clear, 70s, light - med wind

1730 Norm back on barge. Informed him of breaks and readings. KBH

1740 Drop A. Kiel off at dock. Called Annette re: permanent curtain. She said to keep monitoring it.

1751 Swapping out shuttles. KBH
Water level = 600.4 ft. KBH

1800 Start dredging again. KBH

1803 Bob and Norm leave again

1816 Bob and Norm back on barge. Bob indicated our cut includes the eastern edge of lane 2A.

1827 moved to station 0+18 KBH

1841 Stop dredging. Need to change shuttles.

1856 Bob is leaving for the night. ~~Shuttle arrived to swap with full one.~~ KBH Full shuttle taken away.
Waiting on empty shuttle. KBH

1937 Other shuttle arrived KBH

1940 Start dredging again KBH

2012 Stop dredging. Need to change the shuttle.

2030 Other shuttle arrived. KBH

2040 Start dredging again KBH

2045 moved west. Water level = 600.5 ft.

2115 Stop dredging. Full shuttle leaving.

2140 Start dredging again. Lane 1A Station 0+23

2204 Move east in lane 1A. Currently on scow # 59. Had been changed out this afternoon. Norm indicated it may be changed every 24 hrs now that both barges are active. KBH

2220 Stopped dredging. Shuttle is full. KBH

2228 Boat here to haul away shuttle. KBH

2255 Shuttle arrives. KBH

2300 Pick up Diane. Start dredging. KBH

2304 Kelly heads to dock KBH

KBH

Kelly Hudson
7/26/07
mostly cloudy, High 70's, med Wind

1430 Met EVW at dock. Went to White Lakes barge.
A. Kiel discussed oil spills and lightning.
~~1450~~ Currently no one is working
1450 Shuttle swapped out. Start dredging in lane 1A
Station 0+49. Checked Enviro con's HASP.
30 sec between lightning and thunder, 30 min
wait after last lightning strike. ——— KBH
1525 Stop dredging. Shuttle full. ——— KBH
1550 Changing out shuttles. ——— KBH
1551 Start dredging again ——— KBH
1610 Rotating to the west toward lane 2A
1633 Stopped dredging. Shuttle full. Other
shuttle still being off loaded. Apparently,
the working curtain tore. Working on fixing it.
Water level = 600.2 ft ——— KBH
Bob indicated the zip ties broke on one of the seams.
1750 Dropped A. Kiel at the dock ——— KBH
The scow is being changed out. Also changing
buckets with the scow. Norm informed me they
also had to unload 1500 gal of fuel
1920 Permanent curtain appears closed.
1940 Bob leaving for the night. Still not dredging
2010 Other shuttle finally arrived. Still need to
put on other bucket ——— KBH
2054 Changing out shuttles. ——— KBH
2120 Start dredging, near lane 1A / 2A border,
Station 0+33. ——— KBH
Water level = 600.5 ft ——— KBH
2151 Stopped dredging. Need to change shuttles
but water barge likely still working on
changing their bucket. ——— KBH
2220 Can see water barge unloading other shuttle.
Still not dredging ——— KBH

Kelly Hodson
7/26/07 13
cloudy, high 60's
light-med wind

barge 2244 Norm is leaving.
2258 Kenny and Diane arrive at the barge
Discuss daily log and water email.
e/A 2330 Head to the dock. — KBH

KBH

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KBH

Kelly Hudson
7/27/07
Med. Wind, 70's, Mostly cloudy

1905 Arrive at dock. See shuttle moving out. Discuss with EVW progress and schedule.
1953 Start dredging again
2029 Pivot to the West
2030 Resume dredging
Note Crew: Ken - Enviro con
Danny, Mike, Craig - MCM
No MCM supervisor on board
2039 Waiting to change out shuttle
2050 Resume dredging
2111 Water level = 600.4 ft
2125 Stop dredging. Lane 1A, station 0+79
2158 Swapping out shuttles
2207 Start dredging again
2223 Sweeping area
2247 Pivot to the ~~west~~ east
2251 Shuttle full. Stop dredging. Fuel up crane
~~2335 Ted Brown Environcon onboard~~ KBH - Crew change
2347 Water level = 600.2 ft
2355 2nd Shift lect. Wayne - ~~Environcon~~ MCM super on board.
Waiting to finish shuttle change.
00:20 Start dredging again
01:47 Swap out shuttles.
01:56 ~~Start dredging~~ KBH. Move to station 0+93.
02:05 Start dredging
03:20 Stop dredging. Swapping Shuttles
0400 Water level = 600.9. Still not dredging
0410 Start dredging
0455 Moved ~~east~~ north
0532 Stopped dredging due to shuttle change
0551 Start dredging again at station 1+03
0610 Skip - Enviroccon on board
0658 Water level = 600.5 ft

0700 Pick up 324
0725 Dropped

Kelly Hudson
7/28/07 AM 15
light wind, 60s, light fog (sunrise)

0710	Pick up EVW at dock. Need to do water levels (still well) 32 1/2" TOC, download data
0725	Dropped off at dock

KHudson

KBH

Kelly Hudson
7/28/07
PM

Cloudy, low 80s, med-light wind
Expecting rain

1455 Arrive at dock. Discuss progress with EVW.

1510 Arrive on barge. Calibrate turbidity meter @ 10.0 NTU = 10.25 NTU

1522 Stop dredging due to full shuttle.

1555 Swap out shuttles — KBH

1602 Start dredging again. — KBH

Turbidity readings

- pt 303	N46° 29.559	W-84° 23.350	41.5 NTU
- pt 304	N46° 29.614	W-84° 23.250	18.2 NTU
- pt 305	N46° 29.749	W-84° 23.306	6.68 NTU
- pt 306	N46° 29.833	W-84° 23.340	1.75 NTU
- pt 307	N46° 29.766	W-84° 23.448	1.69 NTU
- pt 308	N46° 29.796	W-84° 23.468	1.25 NTU
- pt 309	N46° 29.834	W-84° 23.378	1.52 NTU

1633 Pivot to the west. Currently at Station 1+10

1640 ~~Start~~ Stop dredging. Shuttle full

1730 Skip - ~~Emp~~ on board — KBH

1755 Swap shuttles — KBH

1805 Start dredging again — KBH

1835 Pivot to the west — KBH

Stop dredging — KBH

2005 Move out full shuttle. — KB

2048 Empty shuttle moved in — KBH

2052 Start dredging again. — KBH

2126 Stop dredging. Shuttle full. End day at Station 1+05. Water level = 600.2 ft.

Stopping work until approx 23^{30} 7/29/07 - maintenance day tomorrow.

2200 Head to the dock — KBH

KBH

Kelly Hudson
7/29/07 17
Overcast, Mid 60s, light wind

0830 Arrive at dock. Bob and crew (MCM) at dock as well. Heading to barge. No dredging until night shift (23^{30}) as today will be a maintenance day. Biggest task: Fix permanent curtain.

0835 Water level (HOBO) download.
Before 33 1/4"
After 33 1/4"

As far as I can tell, no one is at the seam or at the curtain.

0840 Back at dock.

KBH

Kelly Hudson
18 7/30/07
Partly cloudy, 80's, lt wind

1430	Arrived at dock. Shuttles changed out	1918
	Discuss progress with EVW. At Station 1+31	1932
1440	On board barge. Need to do turbidity	2015
	Crew: Envirocon - ~~Ben~~ Brett	2111
	MCM - Bob, Wayne, Mike, Danny, Craig	2145
	Calibrate Turbidity @ 10.0 NTU = 9.36 NTU	2217
1455	Pick up A. Kiel ——— KBH	2223
	-pt 310 N46° 29.569 W-84° 23.348 24.7 NTU	2258
	-pt 311 N46° 29.619 W-84° 23.250 12.8 NTU	Note
	-pt 312 N46° 29.740 W-84° 23.311 2.71 NTU	~~1~~ 2300
	-pt 313 N46° 29.763 W-84° 23.425 0.89 NTU	
	-pt 314 N46° 29.772 W-84° 23.492 0.98 NTU	
	-pt 315 N46° 29.836 W-84° 23.419 0.62 NTU	
	-pt 316 N46° 29.819 W-84° 23.345 1.25 NTU	
1512	Stop dredging. Shuttle full. Other shuttle still being off loaded. ——— KBH	
1525	Drop A. Kiel off and return to MCM barge	
1605	Change out shuttles ——— KBH	
1620	Start dredging again ——— KBH	
1700	Water level = 600.16 ft. Informed Envirocon that shuttle was leaking (~~sh~~ still has secondary containment). ——— KBH	
1706	Stop dredging. Shuttle full	
1712	Pick up C. Lantinga (Weston) and Jim Burton at dock. Take to White Lakes barge	
1725	Permanent curtain open to change out scow	
1754	Full scow moving ——— KBH	
1800	C.L, J.B and I go out to scow. Putting ramp in place. Still not unloading. ——— KBH	
1820	Scow begins to unload ——— KBH	
1830	Drop everyone (KL, JB, and A. K) at dock. Still not dredging (both shuttles full) ——— KBH	
1845	Wayne (MCM super) on the barge	

Kelly Hudson
7/30/07
Partly Cloudy, 70s, light wind

1918	Empty shuttle finally moving	KBH
1932	Start dredging again.	KBH
2015	Stop dredging, shuttle changeout	
2111	Start dredging again	KBH
2145	stop dredging - shuttle full	KBH
2217	Shift to the west. Station 1+45 ft	
2223	Start dredging again	KBH
2258	Stop dredging - shuttle full. Refueling crane	
Note	Ken replaced Brett @ approx 2230.	KBH
@ 2300	Head to dock	KBH

KBH

+
on 1+31

Danny, Craig
NTU
— KBH
24.7 NTU
12.8 NTU
2.71 NTU
0.89 NTU
0.98 NTU
0.62 NTU
1.25 NTU
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Kelly Hudson
7/31/07
High 80s, hazy, light wind

1505 Arrive at dock. Discuss progress with EVW.
Work dredging suspended until about 1/2 hr
ago due to broken spring on tag line
At Station 1+54, water level = 600.6 ft
Currently dredging. ——— KBH

1532 Stop dredging - shuttle full. ——— KBH
C. Lantinga and J. Burton at dock observing
operations ——— KBH

1545 Commented to Bob about the working curtain open
Bob and Mike out fixing it ——— KBH

1610 Calibrate turbidity meter
1.0 NTU Std = 0.35 NTU
10.0 NTU Std = 11.7 NTU

1618 Head out to do turbidity readings ——— KBH

1644 Noted dredging started. C.L and J.B.
not seen at dock anymore ——— KBH

1653 Back on barge ——— KBH
Turbidity readings

-pt 318	N46° 29.570	W-84° 23.358	25.7 NTU
-pt 319	N46° 29.778	W-84° 23.431	2.38 NTU
-pt 320	N46° 29.814	W-84° 23.436	1.79 NTU
-pt 321	N46° 29.835	W-84° 23.353	1.59 NTU
-pt 322	N46° 29.821	W-84° 23.326	1.24 NTU
-pt 323	N46° 29.756	W-84° 23.310	2.25 NTU

Did not collect reading in channel due to shuttle
changes. ——— KBH

Note: Crew - Envirolon - Norm
MCM - Bob, Danny, Mike, Craig

1706 Notice dripping from under crane. Bob
looked into it. It's diesel fuel. Sopping up with
rags and sorbent pads. Stopped dredging.

1727 Currently, they're not sure whats wrong.

1810 Discussed with Norm and Bob. Gave my

Kelly Hudson
7/31/07 21
mid 80s hazy, lt wind

W.

Number in case they get up and running
2115 Head back to dock. KBH

2120 Called Norm. One problem fixed but fuel line repair didn't work. Night shift not canceled yet. KBH

— KBH

— KBH

2138 Called Norm. Not fixed yet. Gave Diane Russell's number in case fixed. Called Diane to let her know shes on standby.

KBH

rvey

KBH

ntach open

— KBH

— KBH

— KBH

— KBH

KBH

25.7 NTU
2.38 NTU
1.79 NTU
1.59 NTU
1.24 NTU
2.25 NTU

wtfle

— KBH

raig

with

Y

7/1/07 - SUNDAY

1845 A. KIEL ARRIVES ON DREDGE BARGE.

1930 APPROX START TIME COLLECTING TURBIDITY SAMPLES.
INSIDE TURBIDITY CURTAIN
PT 127 21.1 NTU N 46° 29.572 W 084° 23.320
PT 128 21.2 NTU N 46° 29.582 W 084° 23.316
OUTSIDE TURBIDITY CURTAIN
PT 129 2.59 NTU N 46° 29.823 W 084° 23.317
PT 130 1.25 NTU N 46° 29.772 W 084° 23.386
PT 131 1.63 NTU N 46° 29.796 W 084° 23.420
PT 132 1.71 NTU N 46° 29.832 W 084° 23.348
ONLY 4 TURBIDITY READINGS INSTEAD OF THE REGULAR 8 BECAUSE IT WAS GETTING LATE AND THE WATER WAS CHOPPY.

2016 ELMER ASHORE, A. KIEL BACK ON DREDGE BARGE.

2038 STOP DREDGING. TRANSPORT BARGE FULL OF SEDIMENT AND BEING MOVED TO 56 DREDGE BARGE.

2051 NORM (ENVIROCON) SAID WE ARE PRESENTLY IN DMU-8, LANE 2, STATION 1+60. NORM SAID EACH LANE IS 80' WIDE (ON THE MAP), BUT ACTUAL DREDGING LANE IS LESS THAN 80' WIDE.

2102 SHUTTLE BARGE BACK AT ~~DREDGE~~ 6-8 DREDGE BARGE.
TIDE BOARD = 599.9'

2107 START DREDGING

2154 STOP DREDGING. SHUTTLE BARGE FULL AND BEING TRANSPORTED TO THE 56 DREDGE BARGE.

2220 SHUTTLE BARGE BACK AT DREDGE BARGE

2222 TEST BUCKET CONDUCTED. WHITE SAND OBSERVED AT BOTTOM OF BUCKET. TEST BUCKET CONTAINED APPROX 6-8" OF MATERIAL. TEST BUCKET PASSED. DANNY (MCM OPERATOR) SAID WESTON ONLY DOES ONE TEST BUCKET PRIOR TO MOVING THE DREDGE BARGE.

BARGE.

TURBIDITY SAMPLES.

W 084° 23.320

W 084° 23.316

W 084° 23.317

W 084° 23.386

W 084° 23.400

W 084° 23.398

NSTEAD OF THE

S GETTING LATE

OY.

ON DREDGE

E FULL OF SEDIMENT

GE BARGE.

E PRESENTLY IN

. NORM SAID

MAP), BUT

THAN 80' WIDE.

DREDGE BARGE.

FULL AND BEING

BARGE.

GE BARGE

E SAND OBSERVED

BUCKET CONTAINED

EST BUCKET PASSED.

WESTON ONLY DOES

OVING THE DREDGE

7/1/07 - SUNDAY

2224 START DREDGING. MCM NEEDS TO "CLEAN-OUT" THE SOUTHERN CORNER PRIOR TO MOVING THE DREDGE BARGE FORWARD (WEST).

2300 ENVIROCON SHIFT CHANGE.

2320 STOP DREDGING. MCM SHIFT CHANGE.

2325 BOB (MCM) SAID STATION 1+79 ON THE CENTER LINE (EXTENT OF DREDGING).

2357 START TRANSPORTING THE SHUTTLE BARGE TO THE 56 DREDGE BARGE.

0035 SHUTTLE BARGE BACK AT DREDGE BARGE.

0041 START DREDGING. KEN (ENVIROCON) SAID THE H&S MEETING WAS ABOUT USING GLOVES WHEN HANDLING THE STEEL CABLES AND SITE AWARENESS.

1320 MCM INFORMED A. KIEL THAT THE JACK LINE BROKE ON THE CRANE ON THE 58 BARGE. DREDGE BARGE STILL DREDGING.

1338 STOP DREDGING.

1341 START MOVING SHUTTLE BARGE TO THE 56 DREDGE BARGE.

0251 SHUTTLE BARGE RETURNS TO DREDGE BARGE

0255 RESUME DREDGING

0335 STOP DREDGING. CRANE BEING USED TO TRY AND REPAIR THE #2 SPUD BARR

0413 SPUD BAR REPAIRED. START SHUTTLE TRANSFER TO 56 BARGE.

0456 SHUTTLE BARGE BACK AT DREDGE BARGE.

0503 RESTART DREDGING.

0605 STOP DREDGING. START MOVING SHUTTLE BARGE TO THE 56 BARGE.

0640 SHUTTLE BARGE BACK AT DREDGE BARGE.

0645 AT STATION 1+94.5. RESTART DREDGING.

0700 A. KIEL OFF BARGE.

7/2/MONDAY

1500 A. KIEL AT THE DOCK

1515 DIANE (WESTON) AT DOCK. MCM STARTED OVER DREDGING. MCM OPERATOR WILL EXCAVATE TO THE DESIGNATED ELEVATION (596'), BUT WILL CONTINUE TO DREDGE DEEPER IF HE DOES NOT HIT THE SAND LAYER. MCM OPERATOR WILL INFORM WESTON WHEN THE SAND LAYER IS REACHED. NO OVER DREDGE FORMS ON SITE, WILL DOCUMENT OVERDREDGING IN COC BOOK.

1520 A. KIEL ON DREDGE BARGE.

1525 ENVIROCON SAID NO WORK ON JULY 4TH. LAST SHIFT WILL BE TUESDAY JULY 3RD FROM 3PM-11 PM. DREDGING WILL RESUME THURSDAY JULY 5TH MORNING. ENVIROCON & MCM WILL REPAIR THE TURBIDITY CURTAIN ON JULY 4TH.

1530 ENVIROCON AND MCM LEAVE DREDGE BARGE TO ASSESS CONDITION OF TURBIDITY CURTAIN AND ESTIMATE MATERIALS AND EQUIPMENT REQUIRED FOR NECESSARY REPAIRS.
NO TURBIDITY SAMPLING, TURBIDITY MONITOR NOT ON SITE.

1610 TEST BUCKET AT 199.72. TEST BUCKET FAILED, TOO MUCH ORGANIC MATERIAL IN BUCKET, VERY LITTLE WHITE SAND AND ONLY AT THE VERY BOTTOM OF THE CLAMSHELL. INSTRUCTED ENVIROCON TO DIG AN ADDITIONAL 6" IN THIS AREA.

1621 STOP DREDGING. SHUTTLE BARGE DEPARTS DREDGE BARGE FOR OFF LOADING.

1650 SHUTTLE BARGE BACK AT DREDGE BARGE.

1655 RESTART DREDGING

1705 A. KIEL PASSED AREA. DREDGE BARGE CAN MOVE FORWARD.

7/2/07

A. KIEL CAL

A TEST BUC

WHITE SAND

A. KIEL SAND

BUCKET IN

1" OF ORGAN

A. KIEL APPR

STOP DREDG

A. KIEL

ACROSS COCA

CONTINUE DR

STOP DREDG

SHUTTLE BARG

RESTART

MOVE LAST

A. KIEL AP

APPROX 12"

CLAMSHELL

A. KIEL APP

WITH CLAMSH

DREDGED AREA

RESTART DR

ACTUALLY MOV

STOP DREDGING.

SHUTTLE BARGE

RESTART DR

A. KIEL APP

PROBING DREDG

FORWARD (

STOP DREDGING.

SHUTTLE BAR

RESTART DR

A. KIEL PASSE

STARTED OVER
EXCAVATE TO THE
WILL CONTINUE
NOT HIT THE
WILL INFORM
S REACHED.
WILL DOCUMENT

ULY 4TH. LAST
ED FROM 3AM-
THURSDAY JULY
WILL REPAIR
4TH.
DGE BARGE
TY CURTAIN
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TY MOTOR NOT
KET FAILED, TOO
VERY LITTLE
ERY BOTTOM OF
DOWN TO DIG IN
RTS DREDGE BARGE
ARGE.
ARGE CAN MOVE

7/2/07 MONDAY

1720 A. KIEL CALLED DIANE. DIANE WOULD PASS/ACCEPT A TEST BUCKET (PRIOR TO MOVING FORWARD) IF WHITE SAND IS AT THE BOTTOM OF THE BUCKET. A. KIEL SAID WE USED TO PASS/ACCEPT THE TEST BUCKET IF IT WAS FULL OF SAND W/ APPROXIMATELY 1" OF ORGANICS ON TOP OF THE WHITE SAND.

1737 A. KIEL APPROVED LAST BUCKET. MCM TO MOVE FORWARD. STOP DREDGING TO CHANGE OUT SHUTTLE BARGE.

A. KIEL ALSO OBSERVED OPERATOR SWEEPING BUCKET ACROSS EXCAVATED AREA TO A DEPTH OF 4'.

1739 CONTINUE DREDGING.

1800 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1823 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

1835 RESTART DREDGING. ENVIROCON & MCM REPAIR/MOVE INTERIOR SILT CURTAIN (SLIGHTLY).

1837 A. KIEL APPROVED 2 BUCKETS. BOTH BUCKETS CONTAINED APPROX 12" OF MATERIAL. THE BOTTOM HALF OF THE CLAMSHELL CONTAINED WHITE SAND.

1900 A. KIEL APPROVED TEST BUCKETS AT STA. 2+12. PROBING WITH CLAMSHELL AT 4' DEPTH (WHITE BAR) ACROSS DREDGED AREA. MCM MOVING FORWARD (WEST).

1907 RESTART DREDGING AFTER MOVING THE BARGE. BARGE ACTUALLY MOVED LATERALLY TO THE SOUTH, NOT WEST.

1924 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1955 SHUTTLE BARGE ARRIVES AT DREDGE BARGE

1956 RESTART DREDGING.

2007 A. KIEL APPROVES 2+12 S. A. KIEL OBSERVES CLAMSHELL PROBING DREDGED AREA @ 4' DEPTH. DREDGE BARGE MOVED FORWARD (WEST).

2037 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

2112 SHUTTLE BARGE AT DREDGE BARGE.

2115 RESTART DREDGING

2124 A. KIEL PASSES VISUAL INSPECTION OF SAND IN BUCKET

7/2/07 MONDAY

AT 2+18 SOUTH. PROBING W/CLAMSHELL INDICATES DREDGING DEPTH OF 4' BELOW WATER SURFACE

MCM MOVING BARGE TO STARBOARD (NORTH)

2202 STOP DREDGING. CHANGE OUT SHUTTLE BARGES

2230 SHUTTLE BARGE ARRIVES AT DREDGE BARGE

2234 START DREDGING

2248 A. KIER PASSED DATUM 2+35 TO THE STARBOARD. DREDGE BARGE MOVED FORWARD (WEST) AND CONTINUED DREDGING.

2300 A. KIER OFF SITE.

7/3/07 TUESDAY

1450 A. KIEL ON DOCK.

1510 A. KIEL ARRIVES ON DREDGE BARGE

MCM DREDGING UPON MY ARRIVAL

1522 STOP DREDGING. COMPUTER DOWN.

STARTED DREDGING AT STA. 2+55, DMU-8

1536 RESTART DREDGING, W/O COMPUTER.

1541 A. KIEL PASSED BUCKET INSPECTIONS, AT STA. 2+55, DMU-8

STARBOARD SIDE. MCM MOVING TO PORT.

STOP DREDGING

1550 RESTART DREDGING, LAKE GAUGE 600.2

1607 STOP DREDGING. CHANGE OUT SHUTTLE BARGE. WAITING

ON SITE TO FIX COMPUTER IN CRANE.

1634 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

1637 START DREDGING. MCM PAUSING FOR DEPTH.

1639 A. KIEL PASSED TEST BUCKET. MCM MOVING FORWARD

(ON PORT SIDE) TO THE WEST.

1700 A. KIEL PASSED TEST BUCKET. MCM MOVING FORWARD

AGAIN TO THE WEST.

1722 STOP DREDGING. CHANGE OUT SHUTTLES.

1747 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

1806 A. KIEL PASSED TEST BUCKET AT 2+60. MCM MOVING

DREDGE BARGE STARBOARD (NORTH).

1830 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1900 SHUTTLE BARGE BACK AT DREDGE BARGE.

1933 A. KIEL PASSED BUCKET TEST AT 2+68. MCM MOVING

TO THE STARBOARD. CONTINUE DREDGING.

2000 STOP DREDGING. CHANGE OUT SHUTTLE BARGES.

2023 SHUTTLE BARGE BACK AT DREDGE BARGE.

2024 START DREDGING.

2044 A. KIEL PASSES TEST BUCKETS AT APPROX 2+68 TO THE

STARBOARD. MCM MOVING TO PORT (SOUTH)

2[illegible]8 START DREDGING.

2[illegible]7 STOP DREDGING. CHANGE OUT SHUTTLE BARGES. MCM

7/3/07 TUESDAY

STOPPED DREDGING FOR THE DAY AT STATION
OMU-8 2+70. MEM MOVING DREDGE BAR
TO DREDGE 56 BARGE FOR REPAIRS ON THE
PERMANENT TURBIDITY CURTAIN.

2150 A. KIEL ASHORE

7/9/07 WEDNESDAY

1150	A. KIEL ON DREDGE BARGE. CREW PRESENTLY REPAIRING PERMANENT TURBIDITY CURTAIN.
1430	ALL REPAIRS MADE TO PERMANENT TURBIDITY CURTAIN. DREDGE BARGE RETURNS TO DREDGING AREA.
1510	TURBIDITY CURTAIN BACK IN PLACE. A. KIEL ASHORE.

7/5/07 THURSDAY

1503 A. KIEL ON BOARD DREDGE BARGE

SHUTTLE BARGE LEAVING DREDGE BARGE UPON MY ARRIVAL.

DAN (MCM) SAID WE'RE PRESENTLY AT 2+92 (WHICH IS DMU-9). LAKE GAUGE = 600.5

1528 SHUTTLE BARGE BACK AT DREDGE BARGE.

1530 START DREDGING.

1547 A. KIEL PASSED DREDGED AREA. OPERATOR REMOVED A LARGE BOULDER. A. KIEL INFORMED MCM TO PUT COBBLES / BOULDERS BACK IN THE BAY (ALREADY DREDGED AREA) AND NOT IN THE SHUTTLE BARGE. MCM MOVED FORWARD, & CONTINUED DREDGING.

1615 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

10-12 MPH WINDS FROM NW. WAVE HTS OUTSIDE THE PERMANENT TURBIDITY CURTAIN ARE APPROX. 2'. NO ~~TOSS~~ TURBIDITY SAMPLING TODAY.

1640 SHUTTLE BARGE BACK AT DREDGE BARGE.

1642 START DREDGING.

1645 A. KIEL PASSES DREDGED AREA. MCM STOPS DREDGING = ?

1653 RESTART DREDGING W/O COMPUTER. COMPUTER PRESENTLY NOT OPERATIONAL.

1703 A. KIEL PASSED DREDGED AREA. MCM MOVING TO STARBOARD.

1704 NORM (ENVIROCON) SAID COMPUTER IS OPERATIONAL

1742 ~~CH~~ STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1807 SHUTTLE BARGE RETURNS TO THE DREDGE BARGE

1834 A. KIEL PASSES DREDGED AREA. DREDGE BARGE MOVED FORWARD & TO PORT. CONTINUE DREDGING.

1857 STOP DREDGING = ? OPERATOR REFUELING CRANE. SHUTTLE BARGE CHANGE OUT

1949 SHUTTLE BARGE RETURNS TO DREDGE BARGE

~~2029~~ START DREDGING

7/5/07 THURSDAY

2029 STOP DREDGING. CHANGE OUT SHUTTLE BARGES.

2053 SHUTTLE BARGE BACK AT DREDGE BARGE.

2054 START DREDGING.

2106 A. KIEL PASSED DREDGED AREA, STATION 3+12, OMU-9, PORTSIDE. MCM MOVING DREDGE TO THE STARBOARD SIDE.

2115 STOP DREDGING. REPLACE TURBIDITY CURTAIN ON STARBOARD SIDE OF DREDGE BARGE

2198 START DREDGING.

2216 STOP DREDGING. CHANGE OUT SHUTTLE BARGE ENVIRACON PERSONNEL ON DREDGE BARGE THE ENTIRE SHIFT.

2245 SHUTTLE BARGE AT DREDGE BARGE.

2247 START DREDGING.

2254 A. KIEL PASSED DREDGED AREA. LAST STATION 3+12.

2255 DREDGE BARGE MOVING FORWARD (WEST).

2300 A. KIEL ASHORE.

7/6/07 FRIDAY

1500 A. KIEL ARRIVES ON DREDGE BARGE. MCM IN DMU-9 AT 3+40. SHUTTLE BARGE JUST ARRIVED AT DREDGE BARGE.

1545 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1550 A. KIEL CALLED ANNETTE REGARDING THE SLOPE REQUIREMENTS AT THE EXTENT OF DREDGING. ANNETTE WILL CONTACT CHRIS CANTNER.

1602 ANNETTE/CHRIS SAID TO DREDGE TO THE DREDGING LIMITS JUST LIKE CUT 1. NO 1:1 SLOPE. THE ORGANIC MATERIAL AT THE DREDGE EXTENT LIMITS SHOULD HOLD UP.

1613 SHUTTLE BARGE RETURNS TO DREDGE BARGE.

1635 A. KIEL PASSES DREDGED AREA, UP TO 3+38 ON STARBOARD SIDE. MCM MOVING TO PORT.

1641 TURBIDITY READINGS INSIDE PERMANENT CURTAIN

PT 144	N 46° 29.583	W 84° 23.386	61.5 NTU
PT 145	N 46° 29.582	W 84° 23.345	30.5 NTU
PT 146	N 46° 29.582	W 84° 23.289	20.1 NTU
PT 147	N 46° 29.612	W 84° 23.240	11.8 NTU
PT 148	N 46° 29.666	W 84° 23.251	10.46 NTU

1658 APPROX TIME STOP DREDGING. CHANGE OUT SHUTTLE BARGES.

1723 MCM INFORMED WESTON THAT THE CRANE ON DREDGE 56 IS BROKEN.

1845 SHUTTLE BARGE LEAVES DREDGE BARGE. THE CRANE ON DREDGE 56 WAS FIXED AND HAS BEEN OFFLOADING THE OTHER SHUTTLE BARGE.

1910 SHUTTLE BARGE RETURNS TO DREDGE BARGE.

1913 START DREDGING.

1927 A. KIEL PASSED DREDGED AREA. BARGE MOVES TO THE STARBOARD.

1954 STOP DREDGING. SHUTTLE BARGE IS FULL, BUT NOT TRANSFERRED TO DREDGE 56 BARGE YET.

2029

2055

2058

2111

2117

2140

2156

2232

2246

2300

7/6/07 FRIDAY

2029 SHUTTLE BARGE LEAVES DREDGE BARGE. THE CLAMSHELL BUCKET ON THE CRANE AT THE DREDGE 56 BARGE HAS A REPLACEMENT, SMALLER CLAMSHELL BUCKET, AND ITS TAKING LONGER TO OFFLOAD. MCM STILL WORKING ON THE ORIGINAL CLAMSHELL BUCKET.

2055 SHUTTLE BARGE RETURNS TO DREDGE BARGE.

2058 START DREDGING.

2111 A. KIEL PASSES DREDGED AREA. STOP DREDGING. MCM MOVING TO PORT.

2117 START DREDGING.

2140 STOP DREDGING.

2156 START MOVING SHUTTLE BARGE.

2232 SHUTTLE BARGE BACK AT DREDGE BARGE

2246 A. KIEL PASSES DREDGED AREA. MCM AT 3+62. MCM MOVES TO PORT & CONTINUES DREDGING.

2300 A. KIEL ASHORE

7/7/07 SATURDAY

0645 A. KIEL AT MCM YARD FOR TRANSPORTING WASTE OFF SITE.

FIRST ROUND OF TRUCKS PRESENTLY BEING LOADED. 4 TRUCKS TODAY INSTEAD OF THE 5 WHICH WERE SCHEDULED.

0800 FIRST TRUCK RETURNS TO SITE. 0822 TRUCK DEPARTS.

0812 SECOND TRUCK RETURNS TO SITE. 0838 TRUCK DEPARTS.

0824 THIRD TRUCK (RED) RETURNS TO SITE. 0848 TRUCK DEPARTS

0843 ANNETTE INFORMED ENVIROCON THAT THERE IS RESIDUAL SOIL IN THE STREET FROM TRUCKING.

0847 DON (ENVIROCON) CLEANS UP DEBRIS (SOIL) IN STREET.

0855 FOURTH TRUCK (BLACK) RETURNS TO SITE. 0918 TRUCK DEPARTS.

0906 A. KIEL INSPECTS ROAD. DON (ENVIROCON) JUST FINISHED. NO SOIL OBSERVED ON ROAD.

0910 MCM (KEVIN) INFORMED A. KIEL THAT THE LANDFILL IS HAVING EQUIPMENT PROBLEMS. WE WILL KNOW, FROM THE NEXT TRUCK, IF WE CAN STILL SHIP WASTE/SOIL OFFSITE.

0923 FIRST TRUCK (PURPLE) RETURNS TO SITE. 0957 TRUCK DEPARTS.

0940 SECOND TRUCK (BLACK) RETURNS TO SITE. 1010 TRUCK DEPARTS

0946 DUMP SCOW #59 ARRIVES AT MCM DOCK.

0947 THIRD TRUCK (RED) RETURNS TO SITE. 1033 DEPARTS SITE.

1022 FOURTH TRUCK (BLACK) RETURNS TO SITE. 1048 DEPARTS SITE

MCM RECENTLY STARTED OFF-LOADING DUMP SCOW.

1058 SKIP (ENVIROCON) SAID STOP TRUCKING BECAUSE LANDFILL EQUIPMENT BROKE DOWN.

1106 A. KIEL SPOKE WITH THE LINER CREW. LINER CREW SAID THE FIRST TRUCK DRIVER CALLED AND SAID THE DOZER IS NOT OPERATIONAL, AND WILL NOT BE RETURNING TO THE SITE FOR AN ADDITIONAL LOAD.

1114 A. KIEL OFF SITE.

7/8/07 SUNDAY

1950 A. KIEL ON DREDGE BARGE. MCM PRESENTLY DREDGING.

1537 A. KIEL PASSES DREDGED AREA. PRESENTLY AT STATION 0+52. WATER LEVEL AT ~~222~~ (air) 599.8. MCM MOVING TO THE STARBOARD. PRESENTLY AT DREDGE LANE #3, DMU-7/11.

1553 STOP DREDGING. CHANGE OUT SHUTTLE BARGE

1620 SHUTTLE BARGE RETURNS TO DREDGE BARGE.

1622 START DREDGING.

1645 A. KIEL PASSES DREDGED AREA. MCM MOVES FORWARD (WEST) AND CONTINUES DREDGING. MCM PRESENTLY DREDGING TO 3 TO 3½ FEET BELOW WATER SURFACE. LAKE GAUGE = 600.3.

1708 STOP DREDGING. CHANGE OUT SHUTTLE BARGE

1734 SHUTTLE BARGE RETURNS TO DREDGE BARGE.

1736 START DREDGING.

1809 A. KIEL APPROVES DREDGED AREA. ~~MOVE~~ (air) MCM MOVES TO PORT AND CONTINUES DREDGING.

1847 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1912 SHUTTLE BARGE ARRIVES AT DREDGE BARGE

1915 START DREDGING.

1944 LIGHTNING STRIKE. DREDGING STOPPED.

1954 LIGHTNING STRIKE. THUNDER 5 SECONDS @ LIGHTNING.

2025 START DREDGING

2030 A. KIEL PASSES DREDGED AREA. DREDGE BARGE MOVES FORWARD (WEST) (ON PORT SIDE OF THE DREDGE LANE).

2114 STOP DREDGING. CHANGE-OUT SHUTTLE BARGES

2139 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

2142 START DREDGING. ~~DISTANCE~~ (air) DISTANT LIGHTNING STRIKES TO THE SW. NO THUNDER HEARD. CONTINUE DREDGING.

2147 BOB (MCM) SAID THE USCG ISSUED A SEVERE

7/8/07 SUNDAY

THUNDERSTORM WARNING FOR THIS AREA

2228 THUNDER AND LIGHTNING. STOP DRUDGING

2234 MCM SAID DMG = 0+78

2250 A. KEEL ASHORE

7/9/07 MONDAY

1500 A. KIEL ON BARGE.

~~1505 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.~~

1505 SHUTTLE BARGE DEPARTS DREDGE BARGE.

1510 LAKE GAUGE AT 600.2

1529 SHUTTLE BARGE ARRIVES AT DREDGE BARGE

1547 A. KIEL PASSES DREDGED AREA. DREDGE BARGE MOVES TO PORT. CONTINUE DREDGING.

1553 BOB (MCEM) JUST INFORMED US THAT DREDGING WILL STOP AT 8:00 PM TONIGHT AND RESTART TIL NOON TOMORROW. LACK OF SPACE AT MCEM YARD FOR SEDIMENT.

1602 TURBIDITY SAMPLES INSIDE BAY AREA.

PT 167	N 46° 29.576	W 84° 23.229	28.3 NTU
PT 168	N 46° 29.575	W 84° 23.268	26.1 NTU
PT 169	N 46° 29.629	W 84° 23.235	13.8 NTU
PT 170	N 46° 29.696	W 84° 23.268	12.8 NTU

1632 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1637 TURBIDITY SAMPLING OUTSIDE CURTAIN - RIVER.

PT 171	N 46° 29.805	W 84° 23.2886	2.00 NTU
PT 172	N 46° 29.768	W 84° 23.401	1.31 NTU
PT 173	N 46° 29.779	W 84° 23.431	1.59 NTU
PT 174	N 46° 29.827	W 84° 23.339	1.49 NTU

1654 SHUTTLE BARGE BACK AT DREDGE BARGE

1658 A. KIEL AND VERN (EC) BACK ON DREDGE BARGE.

1706 A. KIEL PASSES DREDGED AREA. DREDGE BARGE MOVES TO PORT (SOUTH), AGAIN.

1755 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1824 SHUTTLE BARGE BACK AT DREDGE BARGE

1910 STOP DREDGING. STOP AT STATION 1+15.

1920 A. KIEL ASHORE.

7/10/07 TUESDAY

1500 A. KIEL ON DREDGE BARGE. PRESENTLY NOT DREDGING BECAUSE THE WATER IS TOO LOW AND THE DREDGE BARGE AND SHUTTLE CANNOT MOVE.

1522 SHUTTLE BARGE DEPARTS DREDGE BARGE FOR OFF-LOAD

1531 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

1554 START DREDGING.

1606 A. KIEL PASSED DREDGED AREA. DREDGE BARGE MOVING TO PORT (SOUTH).

1611 START DREDGING. A. KIEL CALIBRATES TURBIDITY METER

1623

1625 COLLECT TURBIDITY ~~READ~~ MEASUREMENTS INSIDE BAY.

PT 175 N 46° 29.576 W 84° 23.330 22.4 NTU

PT 176 N 46° 29.576 W 84° 23.263 27.4 NTU

PT 177 N 46° 29.641 W 84° 23.247 14.0 NTU

PT 178 N 46° 29.696 W 84° 23.269 9.51 NTU

1643 A. KIEL BACK ON BARGE. DREDGING STOPPED BECAUSE LACK OF WATER. LAKE GAUGE = 579.7'

1710 START DREDGING.

1733 STOP DREDGING. CHANGE OUT SHUTTLE BARGE. SHUTTLE BARGE IS BEING PARTIALLY FILLED BECAUSE OF LOW WATER LEVELS IN THE BAY (600.0)

1800 SHUTTLE BARGE RETURNS TO DREDGE BARGE

1803 START DREDGING. BAY WATER LEVEL 600.4

1842 STOP DREDGING. CHANGE OUT SHUTTLE BARGE. ANDY REHURE TO TALK TO CHRIS LANTINEN AND JIM BURTON. JIM WANTS US TO DOCUMENT IF THE SHUTTLE ~~BARGE~~ BARGE RETURNS TO THE DREDGE BARGE WITH WATER INSIDE.

1914 SHUTTLE BARGE RETURNS W/ WATER INSIDE, START DREDGING.

1916 A. KIEL BACK ON DREDGE BARGE

1959 STOP DREDGING. SHUTTLE BARGE BEING CHANGED OUT.

7/10/07 TUESDAY

2026 SHUTTLE BARGE ARRIVES AT DREDGE BARGE. APPROXIMATELY 8"-10" OF WATER/SEDIMENT IN THE SHUTTLE BARGE.

2029 START DREDGING.

2045 A. KIEL APPROVES DREDGED AREA. MCM MOVES BARGE FORWARD (WEST).

2052 CALIBRATE TURBIDITY METER.

2115 A. KIEL BACK ON DREDGE BARGE.
PT 179 N46°29.761 W84°23.377 NTU 7.68
TURBIDITY SAMPLE COLLECTED BETWEEN THE DUMP SCOW AND PERMANENT TURBIDITY CURTAIN. COULD NOT MAKE IT PAST THE TURBIDITY CURTAIN BECAUSE THE STEEL CABLE WAS TOO HIGH ABOVE THE WATER. MCM STOPPED DREDGING AT 2045 BECAUSE WATER IN THE BAY IS TOO LOW. LAKE GAUGE = 599.7.

2126 MCM ATTEMPTS TO MOVE THE DREDGE BARGE AT BAY WATER LEVEL 599.8.

2128 MCM MOVING THE TURBIDITY CURTAIN.

2135 A. KIEL MEASURED 5½ INCHES OF WATER INSIDE THE SHUTTLE BARGE. SEDIMENT BUILD-UP AROUND THE PUMP MOTOR (INSIDE STEEL COLL). AT THE TIME OF THE MEASUREMENT, MCM PLACED ONLY 2 BUCKETS OF SEDIMENT INSIDE THE SHUTTLE BARGE.

2140 START DREDGING.

2220 STOP DREDGING. CHANGE-OUT SHUTTLE BARGE.

2244 ~~STOP~~ SHUTTLE BARGE RETURNS

2247 START DREDGING. DMC = 1+37

2250 A. KIEL OFF BARGE.

7/11/07 WEDNESDAY

1225 A. KIEL AT MCM YARD FOR OVERSIGHT ON TRUCKING ACTIVITIES WHILE ANNETTE ATTENDS THE MEETING.

1245 H05 TRACTOR LOADED, 9810 TRACTOR BEING LINED, AND 9809 TRACTOR WAITING TO BE LINED.

1252 H05 TRACTOR BEING CLEANED, 9810 TRACTOR STARTED BEING LOADED. ENVIROCON CONTINUES ADDING SAW DUST TO SEDIMENT PRIOR TO TESTING.

1257 H05 TRACTOR DEPARTS SITE. 9809 TRACTOR BEING LINED W/ PLASTIC.

1313 9810 TRACTOR DEPARTS SITE.

1325 G2 TRACTOR ARRIVES ON SITE

1329 9809 TRACTOR DEPARTS SITE

1408 H05 TRACTOR ARRIVES ON SITE. TRAVIS (ENVIROCON) INFORMED A. KIEL THAT THE LINER CREW SHOULD TIE THE THE CORNERS OF THE LINER TO THE TRUCK BED AND SPEND A LITTLE MORE TIME LINING THE BODY BECAUSE ENVIROCON PERSONNEL ARE SPENDING TOO MUCH TIME FIXING THE LINERS DURING LOADING.

1410 G2 TRACTOR DEPARTS SITE.

1415 A. KIEL INFORMED KEVIN ABOUT ENVIROCON'S REQUEST FOR BETTER LINER INSTALLATION.

1417 DON (ENVIROCON) CLEANS DIRT FROM SIDEWALK AND STREET.

1424 9810 TRACTOR ARRIVES ON SITE.

1440 9809 TRACTOR ARRIVES ON SITE

1445 H05 TRACTOR DEPARTS SITE.

1455 9810 TRACTOR DEPARTS SITE

1515 9809 TRACTOR DEPARTS SITE.

1520 A. KIEL OFF SITE.

1600 A. KIEL ON DREDGE BARGE. EPA PRESENTLY ON THE DREDGE BARGE. PUMP SCOW PRESENTLY OPERATING

7/11/07 WEDNESDAY

THE 56 DREDGE. MCM PRESENTLY DREDGING.

1631 MCM PRESENTLY AT 1+71. LANE 3.

1645 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1707 SHUTTLE BARGE DEPARTS DREDGE BARGE. EPA/(WESTON) CRA PERSONNEL ASHORE.

1740 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

1742 START DREDGING. SHUTTLE BARGE ARRIVED WITH WATER AND SEDIMENT INSIDE, APPROX 6-8 INCHES.

1821 STOP DREDGING. CHANGE-OUT SHUTTLE BARGE.

1851 SHUTTLE BARGE ARRIVES BACK AT DREDGE BARGE. APPROX 6 INCHES OF WATER/SEDIMENT INSIDE THE SHUTTLE BARGE.

1854 START DREDGING.

1915 A. KIEL PASSES DREDGED AREA. DREDGED AREA TO APPROX. 3½ TO 4 FEET BELOW WATER SURFACE. WATER LEVEL AT 600.5'. MCM ~~R~~ OK MOVES DREDGE BARGE TO PORT SIDE (SOUTH), AND CONTINUES DREDGING.

1924 CALIBRATE TURBIDITY METER.

1928 TURBIDITY READINGS INSIDE PERMANENT CURTAIN.

PT 180	N 46° 29.575	W 84° 23.558	33.8 NTU
PT 181	N 46° 29.586	W 84° 23.253	17.6 NTU
PT 182	N 46° 29.665	W 84° 23.251	9.37 NTU
PT 183	N 46° 29.741	W 84° 23.298	5.94 NTU

1947 A. KIEL BACK ON DREDGE BARGE. MCM PRESENTLY MOVING DREDGE BARGE FORWARD.

1954 STOP DREDGING. MCM NEEDS TO FIX THE PIN ON THE CLAMSHELL ON THE DREDGE 56 CRANE

~~2025~~ 2025

1955 A. KIEL COLLECTS TURBIDITY MEASUREMENTS IN ST. MARY'S RIVER:

PT 184	N 46° 29.820	W 84° 23.334	1.79 NTU
PT 185	N 46° 29.793	W 84° 23.387	1.73 NTU

7/11/07 WEDNESDAY

PT 186 N46° 29.811 W84° 23.426 2.05 NTU

PT 187 N46° 29.835 W84° 23.370 1.36 NTU

2025 A. KIEL BACK ON DREDGE BARGE

2030 SHUTTLE BARGE BACK AT DREDGE BARGE

2033 START DREDGING. SHUTTLE BARGE CONTAINS APPROX 3-6 INCHES OF WATER/SEDIMENT.

2104 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

2140 SHUTTLE BARGE ARRIVES AT DREDGE BARGE

2144 START DREDGING. 6 INCHES OF WATER/SEDIMENT IN THE SHUTTLE BARGE PRIOR TO DREDGING.

2201 A. KIEL PASSES DREDGED AREA. MCM MOVE BARGE FORWARD (WEST), CONTINUES DREDGING. MCM STILL DREDGING 3½ BELOW WATER SURFACE

2226 STOP DREDGING. CHANGE OUT SHUTTLE BARGE

2243 DAN (MCM OPERATOR) SAID LAST STATION WAS ABOUT 2+00.

2300 A. KIEL ASHORE

7/12/07 THURSDAY

1500 A. KIEL ON DREDGE BARGE. MCM PRESENTLY DREDGING DEEPER TO REMOVE A HIGH SPOT IN THE DREDGE LANE. DREDGE BARGE MOVED BACK (EAST) TO REMOVE HIGH SPOT.

1512 STOP DREDGING. CHANGE OUT SHUTTLE BARGE

1537 SHUTTLE BARGE RETURNS TO DREDGE BARGE.

1540 START DREDGING. MCM CONTINUED OVERDREDGING AROUND STATION 2+00 TO REMOVE A HIGH SPOT IN THE DREDGE LANE. MCM PRESENTLY OVER-DREDGING APPROX 25 EAST OF EDGE OF THE CAT-TAIL EMBANKMENT.

1605 STOP DREDGING. MCM MOVED (33) BARGE FORWARD.

1608 MCM START DREDGING CONTAMINATED SEDIMENT.

1636 CALIBRATE TURBIDITY METER

1639 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1655 CHRIS LANTINGA AND MIKE (MDEQ) ON DREDGE BARGE.

1703 SHUTTLE BARGE BACK AT DREDGE BARGE.

1705 START DREDGING

1758 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1800 CHRIS LANTINGA AND MIKE (MDEQ) ASHORE

1821 SHUTTLE BARGE BACK AT DREDGE BARGE.

1823 START DREDGING.

NORM (ENVIROCON) ASHORE, ATTENDING COMPANY SAFETY DINNER.

1840 CALIBRATE TURBIDITY METER.

TURBIDITY MEASUREMENTS INSIDE BAY AREA.

PT 188 N 46° 29.576 W 84° 23.368 33.2 NTU

PT 189 N 46° 29.574 W 84° 23.289 23.7 NTU

PT 190 N 46° 29.643 W 84° 23.291 10.31 NTU

PT 191 N 46° 29.743 W 84° 23.314 1.67 NTU

TURBIDITY MEASUREMENTS (EA) ON ST. MARY'S RIVER

PT 192 N 46° 29.819 W 84° 23.325 1.02 NTU

PT 193 N 46° 29.782 W 84° 23.413 1.62 NTU

7/12/07 THURSDAY

PT 194 N 46° 29. 808 W 84° 23. 413 1.20 NT.

PT 195 N 46° 29. 832 W 84° 23. 345 0.99 NT.

1908 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1917 A. KIEL BACK ON DREDGE BARGE.

1932 SHUTTLE BARGE BACK AT DREDGE BARGE. SHUTTLE BARGE CONTAINS APPROX 6' OF WATER/SUBSTRATE.

1934 START DREDGING.

1957 A. KIEL PASSES DREDGED AREA. MCM MOVES FORWARD AND STARBOARD (NORTH) AND CONTINUES DREDGING.

2024 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

2035 NORM (EC) BACK ON BARGE.

2055 SHUTTLE BARGE RETURNS. START DREDGING.

2137 STOP DREDGING. CHANGE OUT SHUTTLE BARGE

2146 A. KIEL ASHORE

2210 A. KIEL BACK ON BARGE. MCM SHUTTLE BARGE EN ROUTE TO SB DREDGE BARGE.

2222 SHUTTLE BARGE BACK AT DREDGE BARGE.

2224 START DREDGING.

2253 A. KIEL PASSES DREDGED AREA AT STATION 2+69. DREDGE BARGE MOVED TO POINT (SOUTH). ELMER ON BARGE.

2300 A. KIEL ASHORE.

7/13/07 FRIDAY

1305 A. KIEL ON DREDGE BARGE. MCM USING A SMALLER CLAMSHELL BUCKET W/TEETH BECAUSE THEY ARE DREDGING-UP TOO MANY LARGE ROCKS.

1327 STOP DREDGING. SHUTTLE CHANGE OUT. BRETT (EC) SAID MCM NEEDED TO REPAIR THE BRAKES ON THE DREDGE 56 CRANE. OFFLOADING WAS DELAYED

1338 A. KIEL CALIBRATE TURBIDITY METER.

TURBIDITY READINGS INSIDE THE BAY

PT. 196	N 46° 29.576	W 84° 23.360	24.9 NTU
PT 197	N 46° 29.576	W 84° 23.295	20.0 NTU
PT 198	N 46° 29.634	W 84° 23.240	10.5 NTU
PT 199	N 46° 29.742	W 84° 23.306	2.78 NTU

1404 A. KIEL BACK ON DREDGE BARGE

1445 SHUTTLE BARGE DEPARTS DREDGE BARGE. NORM (EC) ON DREDGE BARGE TO RELIEVE BRETT (EC).

1511 SHUTTLE BARGE BACK AT DREDGE BARGE

1513 START DREDGING. MCM STILL USING THE SMALLER CLAMSHELL BECAUSE THEY ARE STILL DREDGING A LOT OF COBBLES AND SMALL BOULDERS.

1634 INCREASED AMOUNT OF WOOD DEBRIS ALONG WITH COBBLES/BOULDERS BEING DREDGED.

1643 STOP DREDGING. SHUTTLE BARGE CHANGE-OUT.

1715 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

1726 A. KIEL OFF BARGE TO COLLECT TURBIDITY MEASUREMENTS IN ST. MARY'S RIVER.

PT 200	N 46° 29.816	W 84° 23.305	2.61 NTU
PT 201	N 46° 29.785	W 84° 23.406	1.76 NTU
PT 202	N 46° 29.764	W 84° 23.475	2.07 NTU
PT 203	N 46° 29.828	W 84° 23.374	1.64 NTU

1750 A. KIEL ON DREDGE BARGE.

1815 CHRIS LANTINGA CALLED A. KIEL. CHRIS ASKED IF MCM IS SEGREGATING THE >6" ROCKS. A. KIEL SAID

7/13/07 FRIDAY

NO. ROCKS ARE BEING PLACED IN THE PIG PEN 2003
SHUTTLE BARGE. A. KIEL TOLD CHRIS CANTINCA THAT
EC/MCM WAS INFORMED ON JULY 5TH ~~PUT TO~~ (a.k.) PUT THE ROCKS BACK INTO THE ALREADY DREDGED
AREA. CHRIS TOLD ANDY TO INFORM EC NOT
TO PUT ANYMORE ROCKS IN THE SHUTTLE BARGE.
ANDY INFORMED CHRIS "IT LOOKS LIKE WE ARE OUT
OF THE ROCK AREA". MCM WILL BE USING THE
ORIGINAL /LARGER CLAMSHELL AFTER BOB (MCM)
RETURNS TO THE BAY WITH PARTS FOR THE 2036
SHIV. ANDY INFORMED CHRIS THAT EC/MCM 2105
IS AWARE, ~~AGT~~ (a.k.) OF PUTTING ROCKS BACK INTO 2107
THE DREDGED AREAS. SKIP (EC) WAS ON THE 2128
BARGE TODAY TO ADDRESS THIS ISSUE.

1820 A. KIEL INSTRUCTED NORM (EC) NOT TO PUT ANY-
MORE ROCKS IN THE PIG PEN. THEY SHOULD BE 2148
PLACED BACK INTO THE ALREADY DREDGED AREAS
OF THE BAY. 2213

1823 STOP DREDGING. SHUTTLE CHANGE OUT. 2239

1830 NORM (EC) INFORMED A. KIEL THAT THE ROCKS WILL 2241
BE SEGREGATED OUT FROM THE SEDIMENT AT THE 2243
YARD. RELOCATION OF THE ROCKS IS UNKNOWN. 2244

1850 SHUTTLE BARGE RETURNS TO DREDGE BARGE. BOB
(MCM) ON SITE W/ NEW PARTS FOR THE DREDGE 2255
BARGE CRANE.

1852 START DREDGING. STILL W/ SMALLER CLAMSHELL.

1905 AFTER MOVING THE BLUE BOAT (FASTENED TO THE PORT
SIDE OF THE DREDGE BARGE), A. KIEL OBSERVED A
5' GAP IN THE WORKING TURBIDITY CURTAIN. A. KIEL
INFORMED NORM (EC). MCM SAID HE WOULD HAVE
IT FIXED.

1909 MCM CONTINUE TO DREDGE COBBLES FROM THE
BAY SEDIMENT.

7/13/07 FRIDAY

2003 MCM REPAIRED THE WORKING SILT CURTAIN ON THE EAST SIDE OF THE DREDGE BARGE. MCM/EC WILL INSPECT THE EAST END OF THE PERMANENT TURBIDITY CURTAIN. A. KIEL INFORMED NORM (EC) OF THE GAP IN THE TURBIDITY CURTAIN EARLIER TODAY.

MCM PRESENTLY MOVING THE DREDGE BARGE FORWARD. MCM STILL DREDGING-UP COBBLES/BOULDERS.

2036 STOP DREDGING. CHANGE-OUT SHUTTLE BARGE.

2105 SHUTTLE RETURNS.

2107 START DREDGING.

2128 MCM CONTINUES TO USE THE SMALLER CLAMSHELL BUCKET BECAUSE THEY ARE STILL DREDGING-UP COBBLES/BOULDERS.

2148 SAND ENCOUNTERED APPROXIMATELY 2' BELOW WATER SURFACE. WATER LEVEL AT 600.0'

2213 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

2239 DAN (MCM) WE ARE PRESENTLY AT STA. 3+60.

2241 SHUTTLE BARGE BACK AT DREDGE BARGE.

2243 START DREDGING.

2244 STOP DREDGING. THE STEEL CABLE/TAG LINE IS FRAYED. MCM NEEDS TO REPAIR IT.

2255 ANDY ASHORE

7/16/07 MONDAY

1545 A. KIEL ON BARGE. STARTED SHIFT LATE TODAY BECAUSE I NEEDED TO GET THE REPAIRED MOTOR FOR THE ZODIAC BOAT AND INSTALL IT. MCM DREDGING WITH A DIFFERENT, SMALLER CLAMSHELL BUCKET. MCM PRESENTLY IN DREDGE LANE #4. MCM NOT ENCOUNTERING COBBLES/BOULDERS, BUT THEY NEED THE SMALLER CLAMSHELL W/ TEETH IN ORDER TO REMOVE THE SAND LAYER (WHICH IS AT A HIGHER ELEVATION).

1610 MCM PRESENTLY ADDING MORE TEETH TO THE PREVIOUS CLAMSHELL, ACCORDING TO S.O.B (MCM). EC / MCM CONTEMPLATING HAVING THE OTHER DREDGING CONTRACTOR USE THE EXCAVATOR TO REMOVE THE COBBLES/BOULDERS AT THE END OF DREDGE LANE #3, AND IN DREDGE LANE #4 (IF THEY ARE PRESENT).

1630 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1655 SHUTTLE BARGE BACK AT DREDGE BARGE.

1657 START DREDGING.

1731 CALIBRATE TURBIDITY METER.

TURBIDITY READINGS INSIDE BAY

PT 214 N 46° 29.564 W 84° 23.320 21.1 NTU

PT 215 N 46° 29.582 W 84° 23.257 12.9 NTU

PT 216 N 46° 29.645 W 84° 23.259 14.0 NTU

PT 217 N 46° 29.746 W 84° 23.310 8.00 NTU

INSPECTION OF PERMENANT TURBIDITY CURTAIN.

WEST H BEAM = GOOD CONDITION

2ND H BEAM FROM WEST. SEAM IS INTACT BUT FLOTATION DEVICES MISSING.

2ND H BEAM FROM EAST = SEAM COMPLETELY UNFASTENED; 20' GAP IN CURTAIN.

EAST H BEAMS 15' GAP BETWEEN TURBIDITY

7/16/07 MONDAY

CURTAIN AND H BEAM.

1824 STOP DREDGING. CHANGE OUT SHUTTLE BARGE

TURBIDITY MEASUREMENTS ON ST. MARY'S RIVER

PT 218 N46° 29. 829 W84° 23. 324 1.40 NTU

PT 219 N46° 29. 803 W 84° 23.389 1.60 NTU

PT 220 N46° 29. 745 W 84° 23. 444 1.20 NTU

PT 221 N 46° 29. 765 W 84° 23. 465 1.56 NTU

STOP TURBIDITY MEASUREMENTS = LOW BATTERY.

1850 SHUTTLE BARGE AND A. KIEL ARRIVE BACK AT DREDGE BARGE.

1852 START DREDGING. A. KIEL INFORMED NORM (EC) ABOUT THE CONDITION OF THE TURBIDITY CURTAIN. NORM SAID HE WILL WAIT FOR A CALM DAY TO REPAIR.

1940 NORM (EC) AND BOB (MCM) GO TO THE PERMANENT TURBIDITY CURTAIN TO ASSESS AND POSSIBLY REPAIR.

2005 A. KIEL INFORMED NORM (EC) THAT THERE IS OIL ON THE CRANE TRACKS AND IN THE PLASTIC POOL UNDER THE CRANE. NO OIL NEAR THE EDGE OF THE BARGE OR IN THE WATER. EC/MCM WILL LOOK AT THIS ISSUE LATER.

2015 SINCE THE 56 DREDGE CRANE HAS A BIGGER CLAMSHELL AND CAN OFF-LOAD THE SHUTTLE BARGE FASTER, MCM WILL BRING THE EMPTY SHUTTLE BARGE ~~THE TH~~ BIG TO THE DREDGE BARGE, FIRST, WHILE THE SHUTTLE AT THE DREDGE BARGE IS BEING LOADED.

2017 STOP BIG DREDGING. SHUTTLE CHANGE-OUT.

2030 START DREDGING. THE FULL SHUTTLE BARGE IS EN ROUTE TO THE DREDGE 56 BARGE.

2045 NORM (EC) AND BOB (MCM) GO BACK TO THE PERMANENT TURBIDITY CURTAIN FOR FURTHER ASSESSMENT AND REPAIRS.

7/18/07 MONDAY

2110 MCM MOVES THE DREDGE BARGE TO BULK (SOUTH). MOST OF THE DREDGE MATERIAL IS SAND.

2130 NORM (EC) INFORMED A. KIEL THAT EC/MCM WILL REPAIR THE TURBIDITY CURTAIN TOMORROW OR THE DAY AFTER. THE REPAIR WILL TAKE PLACE THE SAME TIME THE REPAIRS TO THE CRANE ON THE DREDGE 56 BARGE IS BEING CONDUCTED. THE PARTS FOR THE CRANE ON THE 56 DREDGE BARGE SHOULD ARRIVE TOMORROW OR THE DAY AFTER TOMORROW.

2158 STOP DREDGING. SHUTTLE CRANE OUT.

2209 START DREDGING.

2300 PRESENTLY AT STATION 0+50

2305 A. KIEL ASHORE.

7/17/07 TUESDAY

1450 A. KIEL ON BARGE. NORM (EC) SAID MCM WILL GO AND REPAIR THE PERMANENT TURBIDITY CURTAIN. MCM PRESENTLY NOT DREDGING. MCM REMOVING CLAMSHELL FROM THE CRANE, AFTER THE CURTAIN IS REPAIRED, DAN (MCM) WILL CONTINUE DIGGING/DREDGING IN DREDGE LANE 4, WHILE EC/MCM WILL SET UP THE WORKING TURBIDITY CURTAIN FOR DMU 17 OR DMU 18. ONCE THE ~~PERM~~ (EC) WORKING TURBIDITY CURTAIN IS INSTALLED, MCM WILL START DREDGING IN DMU 17- OR 18. MCM WILL RETURN TO DREDGE LANE 4 AFTER THE DMU-17/18 AREA IS COMPLETED.

MCM IS REPLACING THE CABLE ON SPUD BAR #2, AND USING A LONGER CABLE IN ORDER FOR THE SPUD BAR TO BE USEFUL IN THE RIVER.

1640 REPAIR TO THE #2 SPUD CABLE COMPLETED. MCM MOVING DREDGE BARGE TO ST. MARY'S RIVER IN ORDER TO INSTALL 100' SECTION OF TURBIDITY CURTAIN. ~~100~~ (EC) NEW 100' SECTION WILL BE INSTALLED IN THE DAMAGED SECTION (2ND H BEAM FROM THE EAST).

2120 DREDGE BARGE BACK IN DREDGE LANE 4. FIXED TURBIDITY CURTAIN FIXED AND BACK IN-PLACE.

2212 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

2220 START DREDGING. NORM (EC) SAID ~~SAID~~ (EC) THE FIXED CURTAIN STILL NEEDS SOME MINOR REPAIRS, SINCE IT WAS GETTING DARK, WILL COMPLETE LATER. EC/MCM WILL INSTALL WORKING CURTAIN AT DMU 17/18 ~~TOMORROW~~ (EC) TOMORROW.

2315 ANDY ASHORE

7/18/07 WEDNESDAY

1500 A. KIEL ON DREDGE BARGE. MCM PRESENTLY WORKING IN DREDGE LANE #4. A SEPARATE MCM CREW OF 3 WORKERS INSTALLING THE WORKING CURTAIN FOR DREDGE LANE 1A (DMU 17).

1523 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1600 START DREDGING.

1654 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1716 START DREDGING.

1730 MCM/EC REPAIRING THE FIX TURBIDITY CURTAIN JUST NORTH OF DREDGE 56. CABLE TIES FROM YESTERDAY'S REPAIRS BROKE ON ONE SEAM. MCM INFORMED A. KIEL THAT MCM WILL CONTINUE TO DREDGE IN LANE 4 UNTIL DREDGE GETS TOO HARD.

THE WORKING TURBIDITY CURTAIN HAS BEEN INSTALLED AT DREDGE LANE 1A.

1830 STOP DREDGING. CHANGE OUT SHUTTLE

1842 START DREDGING

~~2125~~ 1925 NORM (EC) INFORMED A. KIEL THAT THE CRANE ON THE 56 DREDGE IS BROKEN (A BAND-BRAKES) AND MCM IS ~~[illegible]~~ LOOKING FOR A REPLACEMENT PART. NORM (EC) SAID WE MAY HAVE TO SHUT-DOWN.

~~2149~~ 1949 STOP DREDGING. SHUTTLE IS FULL. MCM STILL LOOKING FOR A REPLACEMENT PART FOR THE 56 DREDGE CRANE

2153 BOB (MCM) INFORMED A. KIEL THAT THE "MAKE-SHIFT/FABRICATED" PART FOR THE CRANE ~~IS~~ IS NOT WORKING. DREDGING WILL START TOMORROW AT NOON.

2200 A. KIEL ASHORE

7/13/07. THURSDAY

1452 A. KIEL ON DREDGE BARGE. FIXED TURBIDITY CURTAIN OPENING FOR NEW / OTHER DREDGING CONTRACTOR.

1505 NEW DREDGING CONTRACTOR ENTERS BAY AREA.

1515 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

1552 STILL WAITING TO CHANGE OUT SHUTTLE BARGES. NEW DREDGING CONTRACTOR IS MOVING THEIR EQUIPMENT AROUND (SHUTTLE BARGES) IN THE MCM SHUTTLE BARGE CHANGE-OUT AREA ON THE EAST SIDE OF DREDGE 56.

1620 WHITE LAKES (EK) & DREDGE BARGE POSITIONED NEAR THE DOCK. MCM STILL NOT DREDGING. MCM (EK) WILL BE CHANGING OUT THE DUMP SCOW SOON.

1710 THE FIXED TURBIDITY CURTAIN IS PULLED BACK AND THE EMPTY DUMP SCOW HAS ARRIVED.

1736 FIXED TURBIDITY CURTAIN IS BACK IN PLACE. WHITE LAKES CREW STILL ON THEIR BARGE MAKING PREPARATIONS TO THEIR EQUIPMENT.

1755 FULL SHUTTLE BARGE DEPARTS DREDGE BARGE. STILL NOT DREDGING YET.

1817 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

1819 START DREDGING.

1830 NORM (EC) INFORMED ANDY KIEL THAT WHITE LAKES WILL START WORK AT 0600 HRS TOMORROW. WHITE LAKES WILL INSTALL THE WORKING CURTAIN, THEN START DREDGING.

1930 STOP DREDGING. CHANGE SHUTTLE BARGE.

1934 CALIBRATE TURBIDITY METER.

TURBIDITY READINGS ON ST. MARY'S RIVER.

PT 237	N 46° 29.819	W° 84° 23.328	2.06 NTU
PT 238	N 46° 29.771°	W 84° 23.431	1.59 NTU
PT 239	N 46° 29.788	W 84° 23.468	1.59 NTU
PT 240	N 46° 29.858	W 84° 23.323	1.54 NTU

7/17/07 THURSDAY

2007 START DREDGING.

2016 A. KIEL BACK ON DREDGE BARGE.

2044 CALIBRATE TURBIDITY METER

TURBIDITY MEASUREMENTS INSIDE BAY AREA.

PT 242 N 46° 29.569 W 84° 23.355 31.8

PT 243 N 46° 29.582 W 84° 23.259 11.7

PT 244 N 46° 29.651 W 84° 23.242 10.4

PT 245 N 46° 29.749 W 84° 23.317 2.49

2106 A. KIEL BACK ON DREDGE BARGE

2107 STOP DREDGING. CHANGE OUT SHUTTLES.

2132 START DREDGING.

2246 STOP DREDGING. CHANGE OUT SHUTTLE BARGE

AT STA. 1+20.

2255 A. KIEL ASHORE.

7/20/07 FRIDAY

0635 A. KIEL ON SITE. WHITE LAKES STARTED AT 0600 HRS, AND WILL WORK TIL 1300 HRS.

0700 WHITE LAKES STARTS INSTALLATION OF WORKING TURBIDITY CURTAIN.

0800 A. KIEL INSPECTED THE FIXED TURBIDITY CURTAIN. SMALL GAPIN CURTAIN AT H BEAM/PILING JUST NORTH OF DREDGE 56.

0815 WHITE LAKES CONTINUE INSTALLING WORKING CURTAIN AND MAKING OTHER MODIFICATIONS/PREPARATIONS TO THE BARGE.

1000 SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

1130 START DREDGING. WL IS DREDGING MOSTLY GRAYISH SAND.

1145 A. KIEL ASKED DERRICK (EC) IF WL IS DIGGING FOR DRAFT. DERRICK SAID YES.

1200 STOP DREDGING. WL IS SAYING THE AREA THEY ARE PRESENTLY DREDGING, SHOULD HAVE BEEN DREDGED ALREADY.

WHITE LAKES (WL) STARTED DREDGING IN THE WEST HALF OF LANE B AND THE EAST HALF OF LANE C. APPROXIMATE START LOCATION IS 1+00.

1300 WL SAID THE SHUTTLE BARGE IS LIGHT, BUT THEY ARE GOING TO TRANSPORT IT OUT TO DREDGE 56. SOME WATER WAS ON THE DECK OF THE SHUTTLE BARGE, BUT NO APPARENT GAINS FROM THE PIC PEN.

BACK NOTE: EC AND WL SAID THERE WILL BE NO WORK ON SATURDAY AND SUNDAY. WL WILL START DREDGING ON MONDAY MORNING.

1323 FIRST SHUTTLE BARGE DEPARTS FOR DREDGE 56 FOR OFF-LOADING.

1405 EMPTY SHUTTLE BARGE ARRIVES AT DREDGE BARGE. START DREDGING. A. KIEL AND KLAMER COLLECT TURBIDITY MEASUREMENTS.

5A.
31.8 NTU
11.7 NTU
10.91 NTU
2.49 NTU
BARGE.

7/20/07 FRIDAY

1430 A. KIEL BACK ON DREDGE BARGE.

THE FIRST SHUTTLE BARGE WAS PRIMARILY WHITE SAND. THE PRESENT SHUTTLE BARGE ALSO CONTAINS MOSTLY SAND (ACTUALLY A SANDY SILT) BECAUSE WL IS STILL ACCESS DREDGING.

1455 A. KIEL TALKED TO MIKE (WL). MIKE SAID WL IS STILL DREDGING FOR DRAFTING PURPOSES. EXCAVATOR IS DREDGING MOSTLY GRAY SANDY SILT. MIKE SAID WL WILL BE DREDGING UP TO THE ROCKS ALONG THE SHORELINE AND NOT TO THE WOOD PILINGS. MIKE SAID THIS WAS DECIDED/CHANGED VERY RECENTLY TODAY. DERRICK (EC) NOT ON BARGE PRESENTLY.

1515 STOP DREDGING. SHUTTLE BARGE IS FULL. EMPTY SHUTTLE BARGE HAS ALREADY ARRIVED AT THE DREDGE BARGE.

1535 SHUTTLE BARGE DEPARTS FOR DREDGE 56. EMPTY SHUTTLE BARGE BEING POSITIONED NEXT TO DREDGE BARGE.

1600 MOST OF THE SEDIMENTS BEING REMOVED ARE SANDY SILTS. APPROX 1-2" LAYER OF ORGANICS ON TOP OF SANDY SILT LAYER. (PHOTO)

1735 A. KIEL BACK ON WL DREDGE BARGE. TODAY, WL STARTED AT STATION 1+00 IN THE WESTERN 1/4 OF LANE B AND EASTERN 1/2 OF LANE C, AND DREDGED FROM STATION 1+00 TO THE SHORE LINE LIMITS. THE THIRD SHUTTLE BARGE IS FULL BUT WILL NOT BE TRANSFERRED TO THE 56 DREDGE, FOR OFF-LOADING, UNTIL MONDAY MORNING.

1745 A. KIEL OFF DREDGE BARGE.

1800 A. KIEL ASHORE.

7/21/07 SATURDAY

0915 A. KIEL ON MCM DREDGE BARGE. MCM STILL WORKING ON THE BOOM BEARING ON THE CRANE AT DREDGE 56. MCM WAS SUPPOSED TO START DREDGING AT 0800 HRS THIS MORNING, BUT THE CRANE ON THE 56 DREDGE BARGE NEEDED REPAIRS.

1300 A. KIEL ASHORE. CRANE STILL BROKEN. NO ETA ON WHEN MCM WILL START DREDGING.

7/22/07 SUNDAY

0800 A. KIEL ON BARGE. MCM & EC PERSONNEL ALSO ARRIVE ON THE DREDGE BARGE FOR A 8 AM TO 8 PM SHIFT TODAY.

0814 START DREDGING.

MCM PRESENTLY AT STATION 1+71 IN DREDGE LANE 4. STILL DIGGING FOR DRAFT. MCM STILL USING SMALLER CLAMSHELL BUCKET, WITH TEETH.

0857 NORM (EC) INFORMED A. KIEL THAT MCM WILL BE CHANGING-OUT THE DUMP SCOW IN ABOUT AN HOUR AND A HALF. ALSO, MCM NEEDS TO REPAIR/REPLACE THE HOLDING LINE ON THE CRANE.

0900 STOP DREDGING. CHANGE OUT SHUTTLE BARGE.

0930 START DREDGING. DIFFICULTY MOVING THE TRANSFER BARGE. WATER LEVEL 600.4. POSSIBLE DIFFICULTY MOVING THE SHUTTLE BARGE BECAUSE OF ROCKS (COBBLES/BOULDERS) IN THE BAY, AND THE SHUTTLE BARGES ARE STARTING TO SAG IN INTO THE MUDDLE.

1005 START CHANGING OUT THE DUMP SCOW. MCM STILL DREDGING.

1028 STOP DREDGING. CHANGE OUT SHUTTLE BARGE. MORE TIME REQUIRED FOR THE CHANGE-OUT BECAUSE MCM NEEDS TO CONTINUE TO OFF-LOAD THE SHUTTLE BARGE AT THE SE DREDGE AND CLOSE THE FIXED TURBIDITY CURTAIN.

1109 SHUTTLE BARGE ARRIVES AT DREDGE BARGE

1130 SHUTTLE BARGE STUCK ON BOTTOM NEXT TO DREDGE BARGE. WAYNE (MCM) ASKED A. KIEL IF MCM COULD OFF-LOAD SOME MATERIAL FROM THE BARGE ON TO THE LAND. A. KIEL SAID NO. A. KIEL SAID ~~IT SHOULD~~ HE RATHER NOT SEE THAT AS AN OPTION TO MOVE THE SHUTTLE BARGE.

WATER LEVEL AT 600.2 (PRESENTLY) AND THE SHUTTLE BARGE IS PARTIALLY FILLED.

7/22/07 SUNDAY

1135 A. KIEL INFORMED MORAN (GL) THAT WAYNE (MCM) REQUESTED THE OFF-LOADING OF SOME MATERIAL, AND THAT A. KIEL SAID NO.

MCM DISPERSING THE MATERIAL IN THE BARGE TO EVEN-OUT THE DREDGED MATERIAL.

1157 SHUTTLE BARGE UN-STUCK & EN ROUTE TO SG DREDGE

1220 EMPTY SHUTTLE ARRIVES AT DREDGE BARGE.

1300 NO DREDGING YET. DREDGE BARGE STUCK ON BOTTOM. WATER AT 100.2. LILSO (TUG) OPERATOR CRAIG (MCM) SAID DREDGE LANE #3 IS SHALLOW. MCM CREW SAID THAT POSSIBLE WASH FROM TUG BOAT CAUSED SEDIMENT BUILD-UP IN DREDGE LANE 3

1330 BOB (MCM) DEPARTS FOR DREDGE SG TO CHANGE OUT THE CABLE ON THE CRANE.

MCM DREDGE BARGE STILL MANEUVERING AROUND LOOKING FOR HIGH SPOTS ON DREDGE LANE 3 AND 4.

1350 KELLY (WESTON) ON DREDGE BARGE. A. KIEL WILL REMAIN ON DREDGE BARGE IN LIGHT OF THE PRESENT ACTIVITIES.

1450 A. KIEL ASHORE.

1520 A. KIEL BACK TO TANNERY BAY TO COLLECT TURBIDITY MEASUREMENTS WITH KELLY

1625 A. KIEL ASHORE.

7/23/07 MONDAY

0607 A. KIEL ON ~~&~~ (A.K.) WHITE LAKES (WL) DREDGE BARGE.

0625 SOME OF WL CREW ON DREDGE BARGE.

0632 HBS MTG. DISCUSSED SWING RADIUS ON THE EXCAVATOR.

0705 A. KIEL AND JEREMY DISCUSSED DREDGE LIMITS ALONGA THE SHORELINE AT LANES A, B & C. A. KIEL SAID TO DREDGE UP TO WOOD ~~PILES~~ (A.K.) PILINGS, BUT DO NOT REMOVE PILINGS. THE EXTENT OF DREDING FOR LANES C AND WEST OF C ARE WHERE THE PRESENT COBBLES ARE AT THE SHORELINE. SKIP INSTRUCTED JEREMY TO DREDGE LANES A AND B (INSTEAD OF MOVING WESTWARD FROM OUR PRESENT POSITION) IN ORDER TO PROVIDE SOME DISTANCE FROM THE MCM DREDGE BARGE.

0710 ~~A. KIEL INSTRUCTED A DERRICK OF B~~ (A.K.) A. KIEL INFORMED DERRICK OF MY DISCUSSION W/ JEREMY.

0736 START DREDGING. JEREMY ASKED ABOUT THE SLOPE AT THE PILINGS, AND IF HE NEEDS TO DREDGE SAND UP TO THE PILINGS. A. KIEL ~~SAID~~ (A.K.) SAID SAND SHOULD BE ENCOUNTERED AT THE TOE OF THE 2:1 SLOPE.

0800 SAND FORMATION NOT BEING DREDGED AT THE DESIGNED DEPTH. A. KIEL INSTRUCTED JEREMY TO CONTINUE TO DREDGE DEEPER IN 6 INCH DEPTH UNTIL SAND HAS BEEN OBSERVED.

A. KIEL INFORMED DERRICK OF THESE INSTRUCTIONS TO JEREMY.

0840 JEREMY SAID HE COULD FEEL THE SAND FORMATION WITH THE EXCAVATOR BUCKET. JEREMY ESTIMATED APPROX 12" DEEPER DREDGING THAN SPECIFIED DEPTH NEAR SHORELINE. A. KIEL SAID WE WILL EST. AN OVERDREDGE QUANTITY WHEN WE ARE FINISHED IN THIS LANE.

7/23/07 MONDAY

0900 A. KIEL & ELMER ASHORE. THE ZODIAC BOAT NEEDED REPAIRS. THE INFLATABLE PART OF THE BOAT WAS LOSING AIR.

1000 A. KIEL AND ELMER STILL ASHORE. WL IS MOORING THE DOCK AND DREDGING IN THIS AREA. DREDGE LANE B.

1150 SKIP ON SITE. SKIP INFORMED A. KIEL THAT WE REMOVED TOO MUCH SEDIMENT IN THE WESTERN PORTION OF LANE B ALONG THE SHORELINE. A. KIEL INSTRUCTIONS WERE TO DREDGE UP THE PILINGS AND TO THE ROCK ALONG THE SHORELINE. A. KIEL AND SKIP AGREED ON THE "ROCK" SHORELINE. IT'S ~~WITH~~ AK THE VISIBLE ROCKS EXPOSED AT THE PRESENT WATER LEVEL SURFACE. A. KIEL INFORMED SKIP THAT THE AREA WHICH HE (SKIP) SAID WE OVERDREDGED DID NOT HAVE ANY ROCKS/BOULDERS. A. KIEL SAID WE DREDGED TO THE WOOD PILINGS BECAUSE THERE WERE NO ROCKS IN THAT AREA. SKIP SAID WE SHOULDN'T BE REMOVING THE ROCKS, AND A. KIEL SAID WE DIDN'T, BECAUSE THERE WERE NO ROCKS. SKIP SAID TO CALL CHRIS CANTINCA. A. KIEL LEFT A MESSAGE.

A. KIEL AND SKIP DISCUSSED THE 2:1 SLOPE. A. KIEL SAID HE WAS LOOKING FOR WHITE SAND AT THE TOE OF THE 2:1 SLOPE. A. KIEL INFORMED SKIP THAT OVER DREDGING WAS CONDUCTED NEAR SHORE IN LANE B BECAUSE SAND WAS APPROX 12" DEEPER THAN SPECIFIED. SKIP SAID TO MAKE SURE TO DOCUMENT THE AERIAL EXTENT (STATION #S).

1209 A. KIEL INFORMED DERRICK OF THE CONVERSATION WITH SKIP. A. KIEL ASKED IF WE DREDGED ANY ROCKS FROM ALONG THE SHORELINE, DERRICK SAID NO. A. KIEL SAID WE NEED TO GET TOGETHER BY THE END OF THE DAY TO DETERMINE ANY OVERDREDGING, AT DEPTH, IN LANE B.

7/23/07 MONDAY

1230 A. KIEL TALKED TO JEREMY (WL OPERATOR). JEREMY SAID THE SAND LAYER IN THE WESTERN PART OF LANE A IS HIGHER THAN SPECIFIED. JEREMY NEEDS TO DREDGE FOR DRAFT IN ORDER TO REACH THE EASTERN PORTION OF DREDGE LANE A. A. KIEL ASKED JEREMY IF WE DREDGED ANY ROCKS IN THE WEST PORTION OF LANE B NEAR THE SHORELINE. JEREMY SAID NO. WHEN ASKED, A. KIEL INSTRUCTED JEREMY TO INFORM DERRICK (EC) OF ANY PROBLEMS, CONCERNS, ISSUES, ETC.

1245 ANDY KIEL INFORMED DERRICK OF MY CONVERSATION W/ JEREMY.

1300 STOP DREDGING. SHUTTLE BARGE CHANGE-OUT.

1319 START DREDGING.

1400 STOP DREDGING. MOVING BARGE SOUTHWARD, TOWARDS THE SHORELINE.

1420 WL OPERATOR PLACED 3 LARGE LOGS FROM THE DREDGED AREA ONTO THE SHORELINE. DERRICK (EC) DID NOT DREDGE BARGE TO ASK WHY.

1430 STOP DREDGING.
SHUTTLE CHANGE OUT.

1435 A. KIEL ASKED DERRICK ABOUT THE LOGS ONSHORE. DERRICK SAID BOB (MCM) INSTRUCTED JEREMY NOT TO LOAD THE LOGS INTO THE SHUTTLE. A. KIEL SAID WE CAN'T BE TAKING DREDGED MATERIAL AND PLACING IT ON THE SHORE.

1438 A. KIEL TALKED TO VERN (E.C.). VERN SAID THAT SKIP GAVE THE INSTRUCTIONS TO PLACE THE LOGS ON THE SHORE. VERN WILL CALL SKIP LATER TO ASK WHY.

1445 TWO PHOTO'S OF LOGS ON SHORELINE.

1446 START DREDGING. APPEARS TO BE ON THE WESTERN PORTION OF LANE A.

1540 STOP DREDGING. SHUTTLE IS FULL. WL HAS TO WAIT

7/23
BECAUSE
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TO LOAD
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TODAY.
A. KIEL

7/23/07 MONDAY

BECAUSE THE OTHER SHUTTLE BARGE IS PRESENTLY BEING OFF-LOADED

1638 START DREDGING. EAST PORTION OF CANE A.

1702 STOP DREDGING. ROTATING (EC) (OR) SHUTTLE BARGE AROUND 180° TO LOAD DEWATERED MATERIAL ON THE OTHER HALF.

1712 START DREDGING

1730 STOP DREDGING. SHUTTLE IS FULL. NO MORE DREDGING TODAY.

1745 A. KIEL ASHORE.

7/24/07 TUESDAY

0610 A. KIEL ON WL DREDGE BARGE. WL/EC CREW ALREADY ON BOARD.

0635 START DREDGING. WL CONTINUED DREDGING IN THE EASTERN PORTION OF CANS A.

0700 A. KIEL TALKED TO SKIP (EC). A. KIEL ASKED ABOUT THE LOGS BEING REMOVED FROM THE BAY AND BEING PLACED / STAGED ON THE SHORELINE. SKIP SAID THE LOGS ARE TOO BIG FOR THE CRANE OPERATOR ON THE 56 DREDGE TO HANDLE. A. KIEL ASKED IF EC HAS A PLAN TO REMOVE THEM. SKIP SAID THEY WILL PROBABLY BE BROKEN UP AND SHIPPED-OUT LATER. SKIP SAID HE "SIFTED-THRU" THE PAPERWORK AND DIDN'T SEE ANYTHING ~~WITH~~ (EC) ~~WHAT~~ (EC) ABOUT WHAT HE CAN OR CANNOT DO REGARDING THIS SITUATION (LOGS). SKIP SAID IF THEY RINSE THE LOGS OFF BEFORE PUTTING THEM ON SHORE, HE DOESN'T SEE A PROBLEM. A. KIEL SAID THE DREDGING CONTRACTOR LAST YEAR AND THIS YEAR REMOVED ALL THE LOGS. A. KIEL ASKED WHY NOW, PLACED (EC) THE ~~LOGS~~ (EC) LOGS ON THE SHORE NOW. A. KIEL WILL CONTACT CHRIS REGARDING THIS SITUATION.

0710 DERRICK (EC) SAID NORM (EC) IS BRINGING OVER SOME OVERBREAKE SHEETS TO FILL OUT FROM YESTERDAY.

ANDY INFORMED DERRICK ~~THE THE~~ (EC) THAT THE OPERATOR SHOULD DREDGE TO THE DESIGNED DEPTH, AND NOT DEEPER W/O AUTHORIZATION. A. KIEL WILL OBSERVE DREDGING OPERATIONS AND LOOK FOR THE SAND FORMATION DURING THE DREDGING TO THE DESIGNED DEPTH. IF ADDITIONAL, DEEPER DREDGING IS REQUIRED, WESTON WILL AUTHORIZE.

0732 STOP DREDGING. WL COMPLETED DREDGE CANS A. (EC) ~~AT~~ SAND FORMATION OBSERVED DURING DREDGING.

7/24/07

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7/29/07 TUESDAY

WL TO BE MOVING WESTWARD

0743 START DREDGING. WL DID NOT COMPLETE DREDGE LANE A; THEY JUST MOVED THE TRANSFER BARGE TO THE OTHER SIDE OF THE DREDGE BARGE.

0758 STOP DREDGING. SHUTTLE BARGE CHANGE OUT. THE FIXED TURBIDITY CURTAIN IS BEING OPENED FOR A DUMPSCOW CHANGE-OUT.

0911 STILL NOT DREDGING. WL IS CLEANING THE DECK OF THE SHUTTLE BARGE AND MOVING THE WORKING TURBIDITY CURTAIN.

0930 START DREDGING IN WESTERN PORTION OF LANE B. DREDGE BARGE FACING SOUTH (DREDGING TOWARDS THE SHORELINE). APPROX. START STATION 1+00.

0952 IT APPEARS WL IS DREDGING FOR DRAFT IN ORDER TO REACH THE SHORELINE. A. KIEL OBSERVED APPROX 1-1½' OF SAND IN THE EXCAVATOR BUCKET.

1010 PHOTO TAKEN OF INTER-BEDDED, MULTI-LAYER SAND AND ORGANIC MATERIAL. APPROX LOCATION IS LANE B (WESTERN ½) STATION 1+25. (EC) ~~WL DREDGE~~ WL IS DREDGING TO DRAFT SO THEY CAN ACCESS ALONG THE SHORELINE. DREDGING FOR DRAFT DEPTH IS APPROX 3½' BELOW WATER SURFACE.

PHOTO'S TAKEN OF DREDGING FOR DRAFT DEPTH AND MULTI-LAYER SAND/SEDIMENT MATERIAL.

1030 STOP DREDGING. SHUTTLE BARGE IS FULL.

1042 ~~START DREDGING~~ (EC)

1049 WL DID NOT START DREDGING YET. WL PROBING FOR DEPTH IN THE RECENTLY DREDGED AREA. THE WL GRADUATED MEASURING STICK INDICATED THE DREDGED DEPTH BELOW THE WATER SURFACE AT APPROX 3'.

1053 START DREDGING. WL MOVE NORTHWARD TO APPROX STA. 1+50 TO CONTINUE DREDGING FOR DRAFTING IN LANE B

1140 CHRIS LANTANA CALLED A. KIEL & SAID HE SPOKE TO SKIP

7/24/07 TUESDAY

ABOUT THE LOGS ON SHORE.

1200 A. KIEL SPOKE WITH JEREMY (WL OPERATOR). JER[illegible] SAID THAT DREDGE LANES A, B, & C ARE DONE. SAID HE DID SEE THE SAND FORMATION WHILE [illegible] ALONG THE SHORELINE IN LANE C. A. KIEL INS[illegible] JEREMY NOT TO DO ANY OVERDREDGING UNLESS A[illegible] BY WESTON.

STOP DREDGING.

JEREMY SAID HE NEEDED TO DREDGE FOR DRAF[illegible] NEAR STATION 1+00 AND 0+75. JEREMY SAID HE HAD 2' OF DRAFT PRIOR TO DREDGING IN LANE C.

1210 WL MOVING DREDGE BARGE WEST INTO LANE [illegible]

1232 START DREDGING. WL PRESENTLY DREDGING FOR DRA[illegible] BECAUSE THEY PRESENTLY HAVE ONLY 2' OF DRAFT AT STATION 7? (THE FRONT EDGE OF THE [illegible]

1228 A. DICKINSON RETURNED ANDY'S CALL. ANNETTE SAID [illegible] DREDGE UP TO THE ROCKS ALON THE SHORELINE. [illegible] NOT REMOVE THE CONCRETE PILINGS, DREDGE AR[illegible] THEM. A. KIEL ASKED ABOUT THE ROCKS IN THE CENTER OF THE OPENING TO GET TO THE AREA TO [illegible] SOUTH OF CATTAIL ISLAND. ANNETTE TO CONTACT CAR[illegible]

1244 STOP DREDGING. SHUTTLE CHANGE-OUT.

1251 START DREDGING.

1320 WL MOVED DREDGE BARGE NORTH AND CONTINUED DREDGING. MOST OF THE DREDGED MATERIAL IN THIS AREA IS PRIMARILY SAND.

1400 STOP DREDGING. SKIP & NORM (EC) ON BARGE.

SKIP SAID THE DATA ALONG THE SHORELINE IS SKETCH AND WE SHOULD BE DREDGING DEEPER BECAUSE THE OPERATOR IS DREDGING TO THE DESIGNED DEPTH AND HARDLY REMOVING ANY SEDIMENT. SKIP SAID FR[illegible] THE ROCK SHORELINE TO @ 30' NORTH, THE SAND [illegible] DEEPER THAN THE DESIGNED DEPTH. SKIP AND

7/24/07 TUESDAY

NORM PROPOSED, TO SAVE TIME, IS TO JUST DREDGE THE (GW) DEPTH THE OPERATOR CAN FEEL THE SAND LAYER. RATHER THAN DREDGE TO THE DESIGNED DEPTH INITIALLY, AND THEN REDREDGE THE SAME SHORELINE AREA. ANDY SAID HE IS SEEING SAND IN THE BUCKET. SKIP/NORM SAID THAT SAND IS FROM AREAS NEAR THE DREDGE BARGE AND NOT THE SHORELINE TO 30' AREA. ANDY HAD NO RESPONSE. SKIP SAID HE DIDN'T WANT ALL THAT WATER IN THE SHUTTLE BARGE. ANDY SAID HE'S DRAINING THE BUCKET EVERYTIME. ANDY TOLD SKIP & NORM TO DREDGE TO THE DESIGNED DEPTH AND ANDY WILL DETERMINE IF THE AREA IS CLEAN. ANDY SAID IF WE HAVE TO REDREDGE AN AREA AT GREATER DEPTH, HENCE THE PURPOSE FOR A CHANGE ORDER. GETTING PAID TO RE DREDGE AN AREA. ANDY SAID HE DID NOT HAVE THE AUTHORITY TO CHANGE THIS PROCEDURE (ALLOW WL/EC TO JUST DREDGE TO THE SAND LAYER W/O AUTHORIZATION).

1433 SKIP & NORM OFF BARGE.

1445 TEST BUCKET FOR LANE (GW) & D. PHOTO TAKEN OF PROFILE OF TEST BUCKET. RANGE OF 2 TO 8" OF SEDIMENT ON TOP OF SAND LAYER. ANDY INSTRUCTED JEREMY (WL) TO OVER DREDGE 6" DEEP, 30' OUT FROM SHORELINE, THE LENGTH OF LANE D. DERRICK NOT ON BARGE.

1505 ANDY OBSERVED ALL OVER DREDGING. A LOT OF SEDIMENT DREDGED-OUT.

1511 OVER DREDGE COMPLETED. STOP DREDGING. ANDY APPROVES OVERDREDGE AREA IN LANE D.

1520 A. KIEL, ELMER & KELLY ASHORE, FOR DISCUSSION.

WL START DREDGING LANE E.

1547 ANDY BACK ON DREDGE BARGE.

STOP DREDGING. WL MOVING BARGE FORWARD (SOUTH) ANDY KIEL NOTICED MUCH SAND (GW) IN SHUTTLE BARGE

7/24/07 TUESDAY

1555 WL START DREDGING ALONG SHORELINE IN LANE E.

1557 ANDY CALLED ANNETTE. THE BOUNDARIES OF DREDGE LIMITS IN THE OPEN AREA (NO CATTAILS) SOUTH OF CATTAIL ISLAND HAVE NOT CHANGED SINCE LAST YEAR. DO NOT REMOVE BEAVER DAM IN SW CORNER OF OPEN AREA.

1616 ANDY KIEL APPROVES DREDGE LANE ~~D~~ E. THE WESTERN PORTION OF LANE E ALREADY DREDGED BY MCM IN THEIR LANE 4.
STOP DREDGING.

1648 NORM (EC) SAID ~~THE~~ NO MORE DREDGING TODAY. WL BARGE WILL BE TO CLOSE TO THE MCM BARGE IF WE MOVE.

1690 JEREMY (WL OPERATOR) STATION #S.
LANE A = STATIONS 1+50 TO 2+00
LANE B = STATIONS 0+75 TO 2+00
LANE C = STATIONS 0+75 TO 1+75
LANE D = STATIONS 0+75 TO 1+75
LANE E = STATIONS 1+10 TO 1+40
A. KIEL APPROVED OVERDREDGING FORMS FOR
LANE B = STA 2+00 TO 1+70 (30' x 80' x 12")
LANE D = STA 1+40 TO 1+10 (30' x 80 x 6")

1720 KELLY (WESTON) INFORMED ANDY (WESTON) THAT MCM WILL BE MOVING OUT OF DREDGE LANE 4 AND MOVING TO DMU-17 BEFORE THEY ENCOUNTER THE ROCK AREA.

1725 A. KIEL ASSURED.

DREDGING IN LAND

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7/25/07 WEDNESDAY

0607 A. KIEL & WL CREW ARRIVE ON BARGE.

0649 NO DREDGING YET. WL CREW RETURNED FROM SHORE. TRANSMITTER ON SHORE WAS NOT OPERATIONAL.

0700 START DREDGING NEAR SOUTHERN PORTION OF DREDGE LANE F. WL REMOVING MOST OF THE ROCK ON THE SURFACE AND PLACING BACK ON THE SHORE.

0730 DERRICK ASKED ANDY HOW MUCH CAN THEY DIG FOR FLOTATION. DERRICK SAID W/IN 40' FROM THE DREDGE LIMITS. A. KIEL SAID DREDGE WHATEVER YOU NEED FOR DRAFT. A. KIEL SAID WESTON IS NOT GOING TO INSTRUCT EC/WL HOW MUCH DREDGING THEY HAVE TO DO FOR DRAFTING.

0758 STOP DREDGING. SHUTTLE FULL

NEXT EMPTY SHUTTLE STATIONED ON OTHER SIDE OF DREDGE BARGE. WL REMOVED ONE LOG (APPROX 14" DIA & 12' LONG) AND PLACED ON SHORE. SAND FORMATION IS APPROX AT 598.5 TO 599.0.

0802 START DREDGING. STILL DREDGING FOR DRAFT.

0837 WL OPERATOR ASKED A. KIEL IF HE COULD REMOVE THE CONCRETE (INTACT) PILINGS. HE SAID THEY MOVE WHEN THEY DREDGE NEXT TO THEM. A. KIEL SAID NO. A. KIEL SAID LEAVE INTACT AND DREDGE BEYOND THEM TO DESIGNATED DREDGE LIMITS.

0840 A. KIEL INFORMED DERRICK OF CONVERSATION W/ WL.

0855 DERRICK (EC) SAID THAT SHIP DOES NOT HAVE A PROBLEM REMOVING THE CONCRETE PILINGS (INTACT) JUST AS LONG AS IT'S NOT A DEMOLITION ACTIVITY (IF THE FOOTINGS ARE DEEP IN THE GROUND).

0856 STOP DREDGING. SHUTTLE CHANGE-OUT.

0910 ANDY INFORMED ANNETTE THAT WE HAD 5 SHUTTLE BARGES YESTERDAY. DEPARTURE TIMES FOR EACH BARGE; 0800, 1034, 1245, 1430 AND 1630 HRS.

7/25/07 WEDNESDAY

0942 ANNETTE TOLD ANDY THAT EHC SAYS TO CHRIS AND WE CAN REMOVED THE INTACT CONCRETE PILINGS. (BASED ON THE INFORMATION ANDY PROVIDED).

0943 ANDY INFORMED DERRICK ABOUT THE CONCRETE PILINGS. WESTON & EC WILL OBSERVE THEM REMOVAL AND IF IT'S DIFFICULT, THEY WILL STAY IN PLACE

1010 ANNETTE (WESTON) AND KYLE (CRA) ON SHORELINE ~~ROUTE~~ (OK) IN ORANGE LANE ~~X~~ (OK) F. ANNETTE SAID CRA SAID WE COULD PLACE THE CONCRETE PILINGS (INTACT & LOOSE) ON SHORELINE AFTER WASHING THEM OFF.

1012 A. KIEL INFORMED EC & WL.

1033 START DREDGING. IT SEEMS THE SHUTTLE BARGES ARE BACKING UP AT THE 56 ~~X~~ (OK) DREDGE BARGE FOR OFF LOADING.

1135 STOP DREDGING. SHUTTLE CHANGE OUT. WL HAS BEEN OVER DREDGING IN THE MCM DREDGE LANE 4 NEAR STATION 0+80.

1245 START DREDGING. WL STARTED ~~DOING~~ (OK) DREDGING FOR DRAFT IN LANE G, AT THE SOUTHERN EDGE OF THE MCM LANE 4 ORANGE LANE.

1306 2 PHOTO'S TAKEN OF EXCAVATION, LOOKING S, LANE G, JUST SOUTH OF MCM SOUTH EXTENT OF DREDGE LANE 4.

1315 1 PHOTO TAKEN (LOOKING NE) AT SHUTTLE BARGE. DREDGED MATERIAL FROM LANE G.

1319 STOP DREDGING. SHUTTLE FULL.

1420 START DREDGING.

1428 1 PHOTO TAKEN OF WL EXCAVATOR BUCKET W/ THUMB

1456 1 PHOTO TAKEN. LANE G, LOOKING SOUTH. SAND / ORGANIC INTERFACE.

1457 STOP DREDGING. SHUTTLE IS FULL.

1600 START DREDGING. STILL DREDGING TO DRAFT IN LANE G.

1605 A. KIEL OFF BARGE FOR TURBIDITY MEASUREMENTS.

1635 A. KIEL BACK ON WL DREDGE BARGE. STOP DREDGING

7/25/07 WEDNESDAY

WL EXCAVATOR HAS A SMALL HYDRAULIC LEAK. NO OIL IN THE WATER. WL WANTS TO REPAIR THE LEAK (OK) BEFORE IT GETS WORSE, AND WHILE THEY ARE WAITING FOR THE EMPTY SHUTTLE BARGE TO RETURN.

(AK) 1745 1645 MCM OPENING THE FIXED TURBIDITY CURTAIN FOR DUMP SCOW CHANGE-OUT.

1700 DUMP SCOWS BEING CHANGED OUT.

1715 SHUTTLE BARGE DEPARTS. EXCAVATOR RESUMED.

1717 ~~CONTINUE~~ (OK) START DREDGING. WL CONTINUE TO FIX EXISTING SHUTTLE BARGE WHICH THEY STARTED AT 1600 HRS.

1723 FIXED CURTAIN CLOSED.

1732 A. KIEL BITURSKY EST 533 YARDS DREDGED TODAY. STOPPED DREDGING AT 1725 HRS. BOTH SHUTTLE BARGES ARE FULL. NO MORE DREDGING TODAY. DREDGED AREAS TODAY INCLUDE:

LANE F= ST 1+25 TO 1+75 WESTERN HALF

LANE G= ST 1+50 TO 1+75 WESTERN HALF AND HALF OF EASTERN HALF

1745 A. KIEL ASHORE.

7/26/07 THURSDAY

0603	A. KIEL AND WL CROW (& DERRICK) ON BOARD.
0627	START DREDGING. CONTINE DREDGING IN LANE C, JUST SOUTH OF MCM'S LANE 4 (STA. 1+40). WL CONT. DREDGING FOR DRAFT.
0640	A. KIEL INFORMED DERRICK THAT HE OBSERVED WL DUMPING THE USED BOOT WASH WATER OVER THE SIDE OF THE BARGE. A. KIEL REQUESTED THAT WATER SHOULD BE DUMPED IN THE SHUTTLE BARGE. A. KIEL ASKED ABOUT THE WATER IN THE WHITE BUCKET. DERRICK SAID IT'S HAND WASH WATER, AND THEY ARE GETTING THE WATER FROM THE BAY AT THE BACK OF THE BOAT. A. KIEL SAID THAT SHOULD BE POTABLE WATER.
0654	A. KIEL INFORMED SKIP THAT THERE ARE GAPS IN THE FIXED TURBIDITY CURTAIN, AND WOSTON OBSERVED 2 VISUAL TURBIDITY PLUMES AND HIGH TURBIDITY READINGS. SKIP JUST NODDED. A. KIEL ASKED IF THEY (EC) ~~HAVE~~ CAME UP WITH ANY THING STRONGER THAN CABLE TIES TO FASTEN THE SEAMS. SKIP SAID, "LIKE WHAT".
0707	~~BE~~ STOP DREDGING. SHUTTLE IS FULL.
0739	START DREDGING.
0835	STOP DREDGING. SHUTTLE IS FULL.
0910	START DREDGING.
1012	STOP DREDGING. SHUTTLE BARGE IS FULL.
1030	~~START DREDGING. WL BARGE IS~~ WL MOVING DREDGE BARGE BACKWARD (NORTH) AND ADJUSTING THE WORKING TURBIDITY CURTAIN.
1037	START DREDGING. WL PRESENTLY DREDGING (REMOVING WIND ROW MATERIAL) FROM THE MCM LANE 4.
1110	STOP DREDGING. WL WILL MOVE DREDGE BARGE FORWARD IN LANE 6. A. KIEL & JEREMY DISCUSSED THE DROPS OF OIL ON THE DECK FROM THE EXCAVATOR.

7/26/07 THURSDAY

JEREMY SAID HE REPLACED THE O-RINGS YESTERDAY, BUT WILL TIGHTEN SOME PARTS AFTER WE MOVE FORWARD (TOWARD SOUTH). A. KIEL INFORMED JEREMY TO KEEP THE WORKING CURTAIN UP TO THE BARGE SO THAT ALL DREDGING ARE CONTAINED W/IN THE CURTAIN.

1125 START DREDGING. A KIEL VIDEO TAPED ACTIVITIES.

1140 STOP DREDGING. REPAIR EXCAVATOR.

1150 A. KIEL ASHORE.

1236 A. KIEL ON BARGE. WL WORKING (DREDGING). APPARK START TIME, 1215.

1302 SHEEN OBSERVED. STOP DREDGING. SHUTTLE FULL. A KIEL INFORMED SKIP, DERRICK & JEREMY OF OIL SHEEN ON THE STARBOARD SIDE OF THE BARGE. THE COLORFUL SHEEN DISSIPATED QUICKLY, BUT SOME LIGHT GRAY SHEEN WAS STILL VISIBLE. NATURALLY OCCURING SHEEN WAS OBSERVED ALONG THE SOUTH SHORE BEFORE AND IN THE OPEN AREA JUST SOUTH OF CASTAIC ISLAND. A. KIEL INFORMED everyone ABOUT NO QUANTITIES OF OIL IN THE BAY WATER. A. KIEL SAID IT APPEARED TO BE NATURALLY OCCURRING SHEEN BECAUSE 1) IT QUICKLY DISSIPATED AND, 2) IT APPEARED AS PULSATING PLUMES AS THE BARGE MOVED FROM EXCAVATING/DREDGING.

WL DOES NEED TO REPAIR A HYDRAULIC LINE ON THE BOOM OF THEIR EXCAVATOR, BUT IS SEEM LIKE AN UNLIKELY SOURCE.

1326 WL 1) STILL REPAIRING LEAK ON THE BOOM OF EXCAVATOR AND, 2) WAITING FOR AN EMPTY SHUTTLE TO ARRIVE. NO SHEEN IN THE WATER WHILE SITTING IDLE. NO OIL LEAKS ON BARGE DECK, BUT SEVERAL SMALL (SILVER DOLLAR SIZE) OIL SPOTS ON THE BARGE DECK.

1512 WL EXCAVATOR REPAIRED AND OPERATIONAL. WL SWITCHING OUT SHUTTLES.

7/26/07 THURSDAY

1513 A. KIEL ASKED DERRICK TO CLEAN-UP THE OIL SPILL UNDER THE MOTOR WHICH OPERATES THE SPUD BARS. A. KIEL SAID IT MAY RAIN TONIGHT, DERRICK SAID IT'S PROBABLY SYNTHETIC OIL, BUT WE'LL CLEAN IT UP.

1515 START DREDGING.

SHUTTLE BARGE, WHICH WAS FILLED PRIOR TO EQUIPMENT REPAIRS, DEPARTS FOR OFF-LOADING.

1525 OILY SORBENTS UNDER SPUD BAR MACHINE CLEANED UP, AND NEW SORBENTS PLACED UNDER MACHINE.

1547 STOP DREDGING. SHUTTLE IS FULL.

1630 START DREDGING

1715 STOP DREDGING, SHUTTLE BARGE FULL.

1726 OVER THE RADIO, FIXED TURBIDITY CURTAIN TO BE OPENED FOR DUMPS SEW CHANGE OUTS

1740 RECEIVED COMPLETED DREDGED AREA FOR THE DAY IRREGULAR AREA FROM H CENTERLINE TO F CENTER LINE, FROM STATION 1+00 TO STATION 2+00

1750 ANDY ASHORE.

THE OIL SPILL
THE SPUD
TONIGHT, DERRICK
BUT WE'LL CLEAN
TO EQUIPMENT
WERE CLEANED UP,
ANCHORING
CURTAIN TO BE
FOR THE DAY
E TO F CENTER
N 2+00

7/27/07 FRIDAY

0605 A. KIEL, DERRICK (EC) & WL CREW ON BARGE

0624 H&S MEETING. SLIPS, TRIPS & FALLS AND RAIN FORECAST TODAY.

0653 EMPTY SHUTTLE BARGE ARRIVES AT DREDGE BARGE

0654 START DREDGING. WL START DREDGING AROUND STATION 1+00 IN LANES G & H REMOVING THE SEDIMENT BERM/WIND-ROW FROM YESTERDAY'S EXCAVATION.

0720 WL ALSO CONTINUE DREDGING ~~FURTHER~~ (OV) DEEPER IN THE SAME AREA THEY DREDGED YESTERDAY.

0735 STOP DREDGING. SHUTTLE BARGE FULL. EMPTY SHUTTLE BARGE ALREADY AT DREDGE BARGE.

0742 START DREDGING

0827 STOP DREDGING. FUELING EXCAVATOR.

0916 2ND FULL BARGE DEPARTS FOR OFF-LOADING. CREW WAS WORKING ON ONE OF THE PUSH BOAT ENGINES DURING THE DOWN TIME

0922 START EXCAVATING. WL MOVED BACK (NORTH) TO REMOVE WIND-ROW FROM EXCAVATED AREA.

0932 STOP DREDGING. BOB (MCM) TALKING TO JEREMY.

0945 START DREDGING.

1005 A. KIEL OBSERVED GRAY SHEEN ON BAY WATER SURFACE ON THREE SIDES OF THE WL DREDGE BARGE.

1019 STOP DREDGING. (OVS) MOVE BARGE

1034 START DREDGING. START DREDGING IN CATTAIL ISLAND, MCM'S LANE 4.

1043 STOP DREDGING. THIRD SHUTTLE BARGE BEING TRANSPORTED TO SE BARGE.

1057 START DREDGING. CONT. WESTWARD INTO CATTAIL ISLAND IN MCM'S LANE 4.

1106 A. KIEL ASKED DERRICK (EC) IF THEY COULD MOVE THE WORKING CURTAIN. IT HAS A 10 FT GAP, BUT WL IS DIGGING A PIT (EARTHEN BERMS) SO EC CAN DO THIS LATER WHEN THE EARTHEN BERMS ARE

7/27/07

REMOVED

1111 2 PHOTO'S OF WOOD DEBRIS IN CATTAIL ISLAND. LOOKING WEST.

1127 STOP DREDGING. SHUTTLE FULL.

1140 A. KIEL ASHORE

1303 EMPTY SHUTTLE ARRIVES AT DREDGE BARGE START DREDGING.

1321 PHOTO TAKEN OF SAND LAYER ~~BEC~~ CR BELOW CATTAIL ISLAND. LOOKING W. APPROX MEAN DREDGE CANE 4, STA 2+00.

1330 STOP DREDGING. SHUTTLE IS FULL.

1411 PHOTO OF NATURAL SHORE WITHIN EXCAVATION

1415 FULL SHUTTLE BARGE DEPARTS FOR OFF-LOADING. THE OTHER WL SHUTTLE IS PRESENTLY BEING UNLOADED THIS IS THE FIFTH SHUTTLE BARGE TODAY.

1530 ~~SHU~~ CR EMPTY SHUTTLE BARGE ARRIVES AT DREDGE BARGE. START DREDGING.

1600 STOP DREDGING. SHUTTLE IS FULL. MEAN HAS YET TO START OFFLOADING THE PREVIOUS LOADED SHUTTLE.

1615 CRANE MAST AT DREDGE 56 IS LOWERED ALL THE WAY DOWN. NO OFF-LOADING OCCURRING.

1640 SIXTH SHUTTLE BARGE DEPARTS DREDGE BARGE. THE ~~CRA~~ CR ~~MAS~~ CR CRANE ON THE 56 DREDGE BARGE STILL NOT OPERATIONAL.

1700 56 BARGE CRANE OPERATIONAL, B STARTS OFFLOADING

1730 A. KIEL B WL CREW ASHORE.

7/28/07 SATURDAY

0603 A. KIEL, EC & WL ON DREDGE BARGE.

0613 H&S MEETING.

0626 START DREDGING IN SAME AREA WHICH THEY LEFT OFF FROM YESTERDAY (CATTAIL ISLAND - WESTERN HALF OF CANE H BETWEEN STATIONS 1+00 & 1+50).

0709 STOP DREDGING. SHUTTLE IS FULL.

0706 MCM STARTS OPENING THE FIXED TURBIDITY CURTAIN FOR DUMP SCOW CHANGE OUT.

0713 START ~~EC~~ (EC) DREDGING. LOADING SECOND SHUTTLE.

0733 MCM PRESENTLY CHANGING OUT DUMP SCOWS.

0755 STOP DREDGING. SECOND SHUTTLE IS FULL. MCM SWITCHED DUMP SCOWS AND JUST CLOSED THE FIXED TURBIDITY CURTAIN.

0910 SECOND FULL SHUTTLE DEPARTS FOR OFFLOADING. THE FIRST FULL SHUTTLE (FOR TODAY) PRESENTLY BEING OFFLOADED.

0920 THE SECOND FULL SHUTTLE NOT SENT FOR OFFLOADING. IT WAS STAGED ON THE OTHER SIDE OF THE WL DREDGE BARGE. DREDGE 56 BARGE CANNOT ACCEPT THIS FULL SHUTTLE, YET.

0935 EMPTY SHUTTLE ARRIVES AT ~~4~~ (EW) WL DREDGE BARGE.

0940 WL STARTS LOADING SHUTTLE # 3.

1018 THIRD BARGE LOADED. STOP DREDGING. THE ~~2nd~~ (EW) SECOND SHUTTLE BARGE PRESENTLY BEING OFFLOADED AT 56 DREDGE. A. KIEL ASHORE.

1040 ~~WL MOVED~~ (EW) STOP DREDGING, SHUTTLE FULL

1130 MOVED BACK TO CLEAN-UP WIND-ROW & START DREDGING.

1211 STOP DREDGING. LUNCH & WAITING FOR ~~4~~ (EW) EMPTY SHUTTLE

1323 EMPTY SHUTTLE ARRIVES AT DREDGE BARGE.

1328 START DREDGING.

1329 A. KIEL BACK ON BARGE (WL).

WL MOVED BACK (EASTWARD) TO REMOVE BUILD-UP / WIND-ROW CREATED FROM DREDGING.

1345 STOP DREDGING. SWEEPING THE DREDGED AREA.

1400 START MOVING FORWARD (WESTWARD)

7/28/07 SATURDAY

1401 START DREDGING. STILL LOADING SHUTTLE # 5.

1420 STOP DREDGING. SHUTTLE #5 FILLED. [illegible]

PRESENTLY UNLOADING SHUTTLE # 4.

1510 EMPTY SHUTTLE ARRIVES AT WL DREDGE BARGE.

1513 START DREDGING / LOADING BARGE # 6.

1549 STOP DREDGING. SHUTTLE #6 FULL.

1720 START DREDGING / LOADING SHUTTLE # 7.

1745 STOP DREDGING. SHUTTLE # 7 FULL.

1752 1 PHOTO. TYPICAL SHUTTLE LOAD OF CATTAIL / PEAT DREDGED

MATERIAL.

1810 A. KIEL ASHORE.

7/30/07 MONDAY

0616 A. KIEL, EC & WL ON WL DREDGE BARGE

0630 PHOTO TAKEN OF TYPICAL EMPTY ~~BL~~ (CW) SHUTTLE BARGE.

0635 H&S MEETING. SHIP IS REVISED W/ WL WORK & SHIP IS AWARE OF DOWN TIME FROM OFF-LOADING SHUTTLES.

0641 START DREDGING. WL CONT DREDGING IN EASTERN HALF OF LANE I BETWEEN STATIONS 1+00 AND 1+50. START DREDGING AT DESIGNED DEPTH AND WILL BE DREDGING FOR DRAFT. (MCM'S LANE 4)

0712 EMPTY SHUTTLE BARGE ARRIVES AT WL DREDGE BARGE ON STANDBY FOR ~~OFFLOAD~~ (CW) LOADING.

0718 FIRST SHUTTLE BARGE FULL, DEPARTS FOR OFFLOADING

0730 START DREDGING, START FILLING SECOND BARGE.

0756 STOP DREDGING. SECOND SHUTTLE IS FULL.

0840 A. KIEL ASHORE. HOLDING CABLE ON SE DREDGE CRANE BROKE.

1047 A. KIEL BACK ON WL BARGE. SE DREDGE CRANE OPERATIONAL BUT #2 SHUTTLE FILLED TODAY IS STILL AT WL DREDGE BARGE. MCM ALMOST FINISHED OFF-LOADING #1 WL SHUTTLE.

1115 EMPTY SHUTTLE ARRIVES AT WL DREDGE BARGE.

1120 START DREDGING. STARTING #3 SHUTTLE

1149 STOP DREDGING. SHUTTLE #3 FULL. ~~THE~~ (CW) MCM HAS YET TO START OFFLOADING SHUTTLE #2.

~~HAS~~ (WL) 1305 A. KIEL ASHORE. MCM ALMOST FINISHED EMPTYING THE OTHER SHUTTLE BARGE.

1415 A. KIEL BACK ON DREDGE BARGE. JEREMY SAID THE START & STOP TIME FOR ~~BA~~ (CW) SHUTTLE #4 WAS ~~1330HR~~ (CW) 1330 HRS AND 1358 HRS.

1510 EMPTY SHUTTLE ARRIVES. WL STARTS DREDGING HIGH SPOT NORTH (STARBOARD SIDE) OF THE DREDGE BARGE.

1538 WL CONT. DREDGING. OVER-DREDGING IN MCM'S DREDGE LANE #5 IN ORDER TO CREATE DEEPER CHANNEL FOR SHUTTLE FLOTATION.

1545 WL CONT. DREDGING. ~~&~~ (CW) CONT. DREDGING FOR DRAFT IN

7/30/07 MONDAY

THE ORIGINAL AREA (FRONT/BOW) OF DREDGE BARGE

1554 STOP DREDGING. SHUTTLE #5 FULL.

1715 JIM BURTON & CARS LANDING ON BOARD.

1720 START DREDGING. SHUTTLE #6.

1735 A. KIEL INFORMED DERRICK (EC) THAT THE PIG PEN IS LEAKING WATER AT THE BASE AND NEEDS TO BE REPAIRED.

1745 STOP DREDGING. MOVE DREDGE BARGE BACK (EAST)

1750 START DREDGING. CONT W/ SHUTTLE #6.

1804 STOP DREDGING. SHUTTLE #6 FULL.

1820 A. KIEL ASHORE.

7/31/07 TUESDAY

0610 A. KIEL, ~~EX~~ (CIH) EC (DERRICK) AND WHITE LAKES ON THE DREDGE BARGE. ONE EMPTY SHUTTLE BARGE AT DREDGE BARGE. THE OTHER SHUTTLE BARGE IS EMPTY AND LOCATED AT THE 56 DREDGE BARGE.

0615 A. KIEL INFORMED JEREMY TO CLEAN UP ANY EXTRA HOSES, ROPES & CABLES FROM THE DECK, AND WATCH FOR EPA PERSONNEL INSIDE THE EXCAVATOR SWING RADIUS.

0620 A. KIEL INFORMED JEREMY TO PUT GAS/OIL CANS IN SECONDARY CONTAINMENT.

0624 H&S MEETING. EPA PERSONNEL ON BARGE TODAY, SLIPS TRIPS & FALLS. TRIM BACK CATTAILS ON WALK.

0628 START DREDGING. SHUTTLE #1. WL BACKED UP (EASTWARD) AT CONT. REMOVING WIND-RUN BUILD-UP FROM YESTERDAY'S DREDGE AREA.

0715 EMPTY SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

0721 STOP DREDGING. SHUTTLE #1 FULL.

0730 START DREDGING. SHUTTLE #2.

0755 STOP DREDGING. ~~PR~~ (CIH) WL ~~MOVED BACK AND~~ (AIH) SWEPT/PROBED AREA. LOADED SOME SEDIMENT IN #2 SHUTTLE.

0800 WL MOVED BACK (EAST) AND SWEPT/PROBED AREA TO CLEAN-UP WIND RUN/BUILDUP.

0822 STOP PROBING/SWEEPING TO MOVE DREDGE BARGE FORWARD (WEST).

0830 JEREMY INFORMED ANDY KIEL THAT HE ALLEGEDLY DAMAGED THE EXISTING TURBIDITY CURTAIN YESTERDAY AFTERNOON. A. KIEL SAID IT'S TRIVIAL RIGHT NOW WE CAN FIX IT LATER. DONE MOVING ~~BY~~ (SO) FORWARD.

0831 START DREDGING. STILL FILLING SHUTTLE #2. WL START DREDGING CATTAILS IN DREDGE CANE I, WESTERN HALF, BETWEEN 1+00 AND 1+50.

0832 EMPTY SHUTTLE ARRIVES AT DREDGE BARGE

7/31/07 TUESDAY

0838 STOP DREDGING, SHUTTLE #2 FULL.

0845 START DREDGING. SHUTTLE #3.

0847 A. KIEL ASHORE.

0928 A. KIEL AT BOAT DOCK. STOP DREDGING. SHUTTLE #3 FULL.

0950 A. KIEL BACK ON BARGE. WL REFUELING EXCAVATOR AND WAITING FOR #2 SHUTTLE TO BE OFF-LOADED.

1016 EPA/MDEQ ON WL DREDGE BARGE.

ACTUALLY NO EPA, JUST DP & ECRA & WESTON.

1025 START DREDGING. SHUTTLE #4.

1055 STOP DREDGING, SHUTTLE #4 FULL.

1213 SHUTTLE #4 OPERATING DREDGE BARGE FOR OFFLOADING

1246 EMPTY SHUTTLE ARRIVES AT DREDGE BARGE.

1248 START DREDGING. START SHUTTLE #5.

1318 STOP DREDGING. SHUTTLE #5 FULL

1320 A. KIEL ASHORE

1410 A. KIEL BACK ON BARGE. APPROX START TIME FOR SHUTTLE #6 IS 1405 HRS. WL ENCOUNTERING COBBLES/BOULDERS W/IN THE SAND FORMATION.

1440 STOP DREDGING. SHUTTLE #6 FULL.

1502 START DREDGE. SHUTTLE #7

WL ENCOUNTERING BOULDERS & COBBLES @ ~~FT~~ (AR) 6 TO 12" INTO SAND FORMATION.

1531 STOP DREDGING. SHUTTLE #7 FULL.

1738 EMPTY SHUTTLE ARRIVES AT DREDGE BARGE.

1742 WL DECIDES TO STOP WORK FOR THE DAY.

1750 A. KIEL ASHORE W/ WL CREW.

8/1/07 WEDNESSDAY

0615 A. KIEL, EC & WL CREW ON BOARD

0620 WL INFORMED A. KIEL THAT SOMEONE TRIED TO BREAK-INTO THEIR TOOL BOX. ONE HANDLE WAS MISSING/BROKEN-OFF. THE TOOL BOX WAS STILL LOCKED.

0625 A. KIEL CALLED DIANE (WESTON) (ON MCM BARGE) AND ASKED IF SHE HAD SEEN ANYTHING. SHE SAID NO. A. KIEL SAID I & WL IS NOT BLAMING ANYONE, JUST ASKED IF SHE HAD SEEN ANYONE ON THE WL BARGE.

0630 START DREDGING. SHUTTLE #1. WL CONT. DREDGING IN THE WEST HALF OF DREDGE LANE I, JUST SOUTH OF STATION 1+50.

0708 STOP DREDGING. SHUTTLE #1 FULL

0728 START DREDGING. START SHUTTLE #2.
WL START DREDGING.
MCM START DREDGING.

0743 A. KIEL ON MCM DREDGE BARGE.

0747 A. KIEL INFORMED JIM (MCM) THAT A. KIEL WILL BE WATCHING BOTH BARGES DURING THE DAY, AND CRAWLER (WESTON) WILL START AT 3:00 p.m. A. KIEL ALSO INFORMED JIM THAT WL SAID SOMEONE TRIED TO BREAK-INTO THEIR TOOL BOX LAST NIGHT. A. KIEL ASKED IF EC COULD WATCH WL BARGE AFTER 6 p.m.

0758 WL STOP DREDGING. SHUTTLE IS FULL.

0825 FIXED TURBIDITY CURTAIN IS OPEN. MCM PRESENTLY CHANGING OUT DUMPS SCOW.

0850 FIXED TURBIDITY CURTAIN CLOSED.

0853 MCM STOPPED DREDGING. SHUTTLE IS FULL.

0908 WL START DREDGING (SHUTTLE #3).
WL MOVED BARGE BACK (EAST) ABOUT 15' IN ORDER TO DREDGE WEND-DOWN.

BACKNOTE: A. KIEL ASHORE AT 0900 HRS. THE ZODIAC IS REARMED AND IN THE PARKING LOT.

8/1/07 WEDNESDAY

0945 WL STOP DREDGING. SHUTTLE #3 FULL.
THE WL #2 SHUTTLE IS STILL FULL OF SEDIMENT AND STALLED NEXT TO THE WATER BARGE.
1023 WAYNE (MCM) ON SITE FOR SURVEYING.
WAYNE SURVEYING EXPOSED SEDIMENT AREA WEST OF THE MCM DREDGE BARGE.
1026 MCM START DREDGING.
1045 WAYNE (MCM) SURVEYING ALONG THE WESTERN EXTENT OF DREDGE AREA, MCM'S DREDGE LANES 1-4.
1100 WL START DREDGING.
1117 WL START MOVING DREDGE BARGE.
1118 WL STOP MOVING BARGE. CONT. DREDGING.
CONT. FILLING SHUTTLE #4.
1138 MCM STOP DREDGING. SHIFT CHANGE.
1139 WL STOP DREDGING, ~~SO~~ (CW) SHUTTLE #4 FULL
1149 MCM START DREDGING.
1152 MCM STOP DREDGING. SHUTTLE FULL
1158 MCM START DREDGING.
1222 MCM STOP DREDGING. MOVE BARGE TO STARBOARD.
1227 MCM START DREDGING.
1238 MCM STOP DREDGING. (SHUTTLE FULL)
1300 WL START DREDGING.
1330 WL STOP DREDGING. SHUTTLE FULL.
1356 MCM STARTS DREDGING
1430 MCM STOP DREDGING. SHUTTLE.
1435 PHELPS DODGE CAMERA CREW AT DOCK
1440 WL START DREDGING
1511 WL ~~START~~ (CW) STOP DREDGING (SHUTTLE FULL)
1525 A. KIEL ASHORE.

8/2/07 THURSDAY

0610 WL ARRIVES ON BARGE.

0625 WL RADIO'D THAT THEY HAVE GPS PROBLEMS.

0630 WL START DREDGING, SHUTTLE #1.

0648 WL STOP DREDGING. REASON UNKNOWN

0650 WL START DREDGING, SHUTTLE #1 AGAIN.

0702 A. KIEL ARRIVES AT WL DREDGE BARGE. PRIOR INFORMATION PROVIDED BY DIANE RUSSELL.

0705 MCM STOP DREDGING. SHUTTLE FULL.

0711 MCM STARTS DREDGING.

WL START MOVING THE WORKING TURBIDITY CURTAIN TO THE WEST, WHILE DREDGING. DREDGED AREA WAS CONTAINED WHILE MOVING THE WORKING CURTAIN.

WL DREDGING TO ~~START~~ BOTTOM PORTION OF DRAFT DEPTH IN WEST HALF OF LANE ~~A~~ A BETWEEN STA 1+50 TO 2+00.

0724 WL STOP DREDGING. SHUTTLE #1 FULL

0726 WL START MOVING BARGE BACK BACK (EAST) AND CONTINUE TO MOVE WORKING CURTAIN. WL REMOVING LAST OF THE CATTAILS FROM CATTAIL ISLAND AND WIND-RUN/BUILD-UP MATERIAL.

0735 WL START DREDGING. START SHUTTLE #2

LIGHT DRIZZLE STARTING.

0821 WL STOP DREDGING, SHUTTLE #2 FULL

0830 MCM STOP ~~A~~ DREDGING. DRIZZLE TURNING TO RAIN.

0840 MCM START DREDGING.

0855 HEAVY RAIN STARTING.

0905 HEAVY RAIN STOPPED

0919 WL STARTS SWEEPING/PROBING THE DREDGED AREA.

START LOADING SHUTTLE #3.

0929 STOP SWEEPING/PROBING AREA. START MOVING THE DREDGE BARGE SOUTH (LANE H).

0933 START DREDGING. CONT. SHUTTLE #3.

0945 MCM STARTS LEASING FIXED TURBIDITY CURTAIN TO CHANGE OUT DUMP SEAM.

8/2/07 THURSDAY

0957 MCM STOP DREDGING. SHUTTLE IS FULL.

1004 WL STOPS DREDGING. SHUTTLE #3 FULL.

1103 FIXED TURBIDITY CURTAIN CLOSED. MCM CHANGED-OUT THE PUMP SCOW AND OFF-LOADED DIESEL FUEL.

1141 MCM START DREDGING

1155 WAYNE (MCM) SURVEYING THE MCM DREDGE LANE 1A.

1239 MCM STOPS DREDGING. SHUTTLE FULL

1302 WL START DREDGING.

1327 WL STOPS DREDGING (SHUTTLE #4 FULL)

1406 MCM STARTS DREDGING

1445 MCM STOP DREDGING. SHUTTLE IS FULL

1455 A. KIEL ASHORE.

8/3/07 FRIDAY

0605 WL ARRIVE ON SITE.

0690 WL START DREDGING

0700 A. KIER ARRIVES ON WL BARGE

0705 WL STOPS DREDGING (SHUTTLE #1 FULL)

MCM PRESENTLY DREDGING.

0716 WL START DREDGING (SHUTTLE #2)

0730 MCM STOPS DREDGING (SHUTTLE IS FULL)

0749 MCM STARTS DREDGING.

0756 WL STOP DREDGING. SHUTTLE #2 IS FULL.

0830 A. KIER ARRIVES ON MCM BARGE

WL STARTS DREDGING. SHUTTLE #3.

0852 A. KIER BACK AT WL DREDGE BARGE

0910 WL STARTS PROBING/SWEEPING DREDGED AREA FOR DEPTH.

0913 WL STOPS PROBING FOR DEPTH. SHUTTLE #3 FULL.

0916 MCM STOPS DREDGING. SHUTTLE IS FULL.

0925 MCM MOVING DREDGE BARGE TO PORT.

0938 MCM START DREDGING.

0958 WL EMPTY SHUTTLE ARRIVES AT DREDGE BARGE.

START PROBING FOR DEPTH.

1008 WL STOP PROBING AND START MOVING BARGE BACK (NORTH) TO RESUME WIND-ROW/BUILD-UP.

1012 START DREDGING. SHUTTLE #4.

1052 WL STOP DREDGING - SHUTTLE BARGE IS FULL.

1054 MCM STOP DREDGING. SHUTTLE IS FULL. MCM HAVING DIFFICULTY BRINGING THE EMPTY SHUTTLE BARGE INTO POSITION BECAUSE HIGH WINDS (17 KNOTS).

1105 MCM START DREDGING.

1107 BECAUSE OF HIGH WINDS AND HIGH WAVES, A. KIER ATTEMPTED TO INSPECT THE FIXED TURBIDITY CURTAIN.

1127 WL START PROBING/SWEEPING THE AREA FOR DEPTH, AND EMPTY SHUTTLE BARGE ARRIVES AT DREDGE BARGE.

1131 STOP PROBING (WL) AND ~~MOV~~ START MOVING THE

8/3/07 FRIDAY

DREDGE BARGE WEST.

1137 STOP MOVING (WL) DREDGE BARGE AND START DREDGING.

1138 MCM STOP DREDGING. SHIFT CHANGE.

1150 MCM STARTS DREDGING AFTER SHIFT CHANGE. MCM CONTINUES LOADING STARTED AT 1105 HRS.

1203 MCM MOVING DREDGE BARGE.

1207 MCM STOP MOVING DREDGE BARGE AND START DREDGING. CONTINUE LOADING SHUTTLE BARGE STARTED AT 1105 HRS.

1212 MCM STOPPED DREDGING. REASON UNKNOWN.

1218 MCM STARTED DREDGING, LOADING SAME SHUTTLE BARGE STARTED AT 1105 HRS.

1223 WL STOPPED DREDGING. SHUTTLE #5 FULL.

1231 KELLIE ANNE STARTS ~~REMOVING~~ (EB) MOVING FIXED TURBIDITY CURTAIN FOR DUMP SCOW CHANGE OUT.

1253 MCM STOP DREDGING, SHUTTLE FULL.

1309 FIXED TURBIDITY CURTAIN REPLACED.

1310 MCM STARTS LOADING SHUTTLE BARGE.

1315 A. KIEL ASHORE

1355 A. KIEL BACK ON BARGE.

1400 A. KIEL & EC & WL HEARD ON RADIO THAT THE CLAMSHELL ON MANITOWOC (DREDGE SC) HAS TO BE REPLACED BECAUSE IT BROKE.

1405 APPEARS THE CRANE ON SC IS OPERATIONAL

1440 THE WORKING TURBIDITY CURTAIN (MCM) AND WEST END OF FIXED TURBIDITY CURTAIN NEEDS REPAIR, BUT WAVES AND WIND ARE TO STRONG TODAY.

1450 WL STARTS DREDGING. SHUTTLE #6.

1453 MCM (EB) STOPPED DREDGING, SHUTTLE FULL.

1500 A. KIEL ASHORE.

8/6/07 MONDAY

1620 STOP DREDGING (WL) SHUTTLE FULL.

1630 A. KIEL ON WL DREDGE BARGE. A. KIEL TRAVELED TO SAULT SAINTE MARIE THIS MORNING AND ARRIVED IN TOWN AROUND 1415. ELMER (WESTON) WAS RESPONSIBLE FOR OVERSIGHT OF THE WL DREDGE BARGE. THE SHUTTLE FILLED AT 1620 HRS WAS #5.

1735 START DREDGING. START SHUTTLE #6.

1800 STOP DREDGING. SHUTTLE #6 IS FULL.

1800 WL CREW START FUELING AND GREASING EXCAVATOR

1820 WL CREW ASHORE.

8/7/07 TUESDAY

0605 A. KIEL, EC AND WL ON THE BOAT. WATER LEVEL IN BAY IS DOWN AND WL PUSH BOAT CAN'T MOVE.

0642 TUG BOAT AT WL DREDGE BARGE AND CREW IS ABOARD.

0705 WL STARTS DREDGING. WL DREDGE BARGE WAS MOVED BACK APPROX 10 FEET BECAUSE THE FRONT PART OF THE BARGE WAS "HARD AGROUND".

0745 STOP DREDGING. SHUTTLE #1 FULL.

0751 START DREDGING. WL CONTINUING TO DREDGE FOR DRAFT IN THE SOUTH CENTRAL PORTION OF OF THE OPEN AREA (BETWEEN 2+50 AND 3+00, LANE 4).

0815 WL STARTS PROBING/SWEEPING DREDGED AREA.

0829 WL STOPS PROBING/SWEEPING/DREDGING AREA. ~~DREDGE~~ SHUTTLE BARGE #2 IS FULL.

0930 WL EMPTY SHUTTLE ARRIVES AT DREDGE BARGE. WL REMOVING SOME OF THE SAND FROM THE FULL SHUTTLE, AND PLACING IT IN THE EMPTY SHUTTLE. THE WATER LEVEL IN THE BAY DROPPED, AGAIN, AND THE ~~FULL~~ FULL SHUTTLE IS TOO HEAVY.

0938 WL STOP TRANSFERRING SEDIMENT FROM ONE SHUTTLE TO THE OTHER.

0950 WL STARTS DREDGING, START SHUTTLE #3. MICHAEL OPENING FIXED TURBIDITY CURTAIN FOR DUMPSCOW CHANGE-OUT. A. KIEL ASHORE.

1110 A. KIEL BACK ON WL DREDGE BARGE. ELMER SAID SHUTTLE #3 DEPARTED THE DREDGE BARGE AT 1058. WL STARTED DREDGING SHUTTLE #4 AT 1112 HRS.

1142 STOP DREDGING. SHUTTLE #4 IS FULL.

1307 MICHAEL SAID, OVER RADIO, THE CLAMSHELL ON THE MANITOWOC IS STUCK 1/2 WAY OPEN.

1329 WL STARTS DREDGING. BARGE WAS MOVED BACK (TO NORTH) IN ORDER TO ~~CLEAR~~ REMOVE THE

8/7/07

WIND-ROW,

1408 STOP DREDGE

1413 CONT DREDG

1445 STOP DREDG

1616 START DRE

WIND-ROW/S

1706 STOP DREDG

WL MOVING

WORKING TOW

1717 STOP MOVI

1718 WL STARTS

1740 A. KIEL ASHO

8/7/07 TUESDAY

WINDROW/BUILD-UP. START BARGE #5.

1408 STOP DREDGING. MOVE BARGE.

1413 CONT DREDGING. SHUTTLE #5.

1415 STOP DREDGING. SHUTTLE #5 FULL.

1616 START DREDGING. SHUTTLE #6. WL CONTINUES REMOVING WINDROW/BUILD-UP IN LANE H.

1706 STOP DREDGING. SHUTTLE #6 FULL

WL MOVING BARGE BACK (NORTH) AND ADJUSTING THE WORKING TURBIDITY CURTAIN.

1717 STOP MOVING BARGE.

1718 WL STARTS FUELING (GIS) AND LUBRICATING THE EXCAVATOR.

1740 A. KIEL ASHORE.

8/8/07 WEDNESDAY

0608 A. KIEL, EC AND WL CREW ARRIVES ON THE WL DREDGE BARGE.

0628 WL STARTS DREDGING IN THE VICINITY OF 2+00 IN LANE H. WL CONTINUE DREDGING FOR DRAFT. THE LAST EXTENT ~~OF~~ (6) ~~X~~ (6) WHICH WL DREDGED FOR DESIGNED DEPTH IS LANE H AT (APPROX) STATION 3+00.

0715 STOP DREDGING. SHUTTLE #1 IS FULL.

0733 START MOVING WORKING TURBIDITY CURTAIN IN ORDER TO MOVE THE BARGE.

~~0842~~ (0842) START DREDGING. (START SHUTTLE #2). WL START

0743 DREDGING IN LANE H (APPROX) AT STA. 330. THE WATER ELEVATION IS 600.8. WL SHOULD BE DREDGING TO DESIGNED DEPTH AT THIS LOCATION.

0758 2 PHOTO'S TAKEN OF EXCAVATION, ~~3~~ (2) LOOKING SOUTH. APPROX LOCATION = BORDER OF LANE H AND G NEAR STATION 3+30.

0807 2 PHOTO'S TAKEN. BOTH LOOKING WEST. ONE PHOTO OF X-SECTION OF EXCAVATED MATERIAL IN THE EXCAVATOR BUCKET, AND THE OTHER PHOTO IS THE DIFFERENCE BETWEEN THE SAND AND ORGANIC MATERIAL IN THE SHUTTLE BARGE.

0814 STOP DREDGING. SHUTTLE #2 IS FULL.

0901 START DREDGING. START SHUTTLE #3.

0930 STOP DREDGING. SHUTTLE #3 FULL

0948 A. KIEL INFORMED BY WL THAT THE MANITOWOC STOPPED OFF-LOADING AT 0940 HRS. REASON FOR STOPPAGE IS UNKNOWN.

1002 MANITOWOC IS OPERATIONAL.

1004 MANITOWOC IS, AGAIN, NOT OPERATIONAL.

1008 MANITOWOC IS OPERATIONAL.

1012 JEREMY (WL) SAID THE EXTENT OF HIS PRESENT EXCAVATION (TO THE SOUTH) IS STATION 3+15.

8.

1025 WL

1030 A. KI

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1217 STAR

1242 STOP

1300 STAR

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1743 2 P

(2) X-S

LANE

1750 STOP

1800 A. K

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3+15.

8/8/07 WEDNESDAY

1025 WL STARTS DREDGING. START SHUTTLE #4.

1030 A. KIEL ~~PM~~ (CW) STARTS INSPECTION OF FIXED TURBIDITY CURTAIN IN SHALLOW (EAST-END) PORTION OF BAY. AN OPENING IN THE TURBIDITY CURTAIN ALONG THE WEST SHORELINE, APPROX 35', CAUSED BY THE ROPE BREAKING. INTERIOR ANCHOR LINE (ROPE) NOT ATTACHED TO AN ANCHOR. A. KIEL COULD NOT FIND THE ANCHOR.

1055 TURBIDITY INSPECTION COMPLETED. WL STOPPED DREDGING. SHUTTLE #4 FULL.

1217 START DREDGING. START SHUTTLE #5.

1242 STOP DREDGING. SHUTTLE #5 FULL.

1400 START DREDGING. SHUTTLE #6.

1430 STOP DREDGING (APPROX STOP TIME) SHUTTLE FULL.

1532 MCM START PULLING-BACK FIXED TURBIDITY CURTAIN TO CHANGE OUT THE DUMP SCOW.

1623 FIXED TURBIDITY REPLACED, DUMP SCOW ENROUTE TO THE MCM YARD.

1725 START DREDGING. START SHUTTLE #7.

1743 2 PHOTO'S TAKEN OF EXCAVATION SIDE WALL. LOOKING ~~N~~ (CW) SOUTH. APPROX LOCATION = WESTERN ~~CR~~ (CW) SIDE OF LANE 6, STATION 3+10.

1750 STOP DREDGING. SHUTTLE #7 FULL.

1810 A. KIEL ASHORE

8/9/07 THURSDAY

0609 A. KIEL, EC AND WL CREW ARRIVE ON DREDGE BARGE.

0629 START DREDGING. SHUTTLE #1. WL CONTINUE DREDGING IN LANE 4 IN THE VICINITY OF 3+00, AND THE WESTERN HALF OF LANE 6, IN THE VICINITY OF 2+50 TO 3+00. WL STILL DREDGING FOR DRAFT.

0701 STOP DREDGING, SHUTTLE #1 FULL.

0718 START DREDGING. START SHUTTLE #2.

0726 A. KIEL OBSERVED WAYNE (MCM) SURVEYING THE THE MCM DREDGED AREAS. APPROX. LOCATION MCM DREDGE LANE 2A & 3A.

0752 STOP DREDGING. SHUTTLE #2 FULL.

0835 START DREDGING, START SHUTTLE #3.

0900 STOP DREDGING. SHUTTLE #3 IS FULL.

1035 START DREDGING. START LOADING SHUTTLE #4.

1111 STOP DREDGING. SHUTTLE #4 IS FULL.

1125 A. KIEL ASHORE.

1300 A. KIEL BACK ON SITE. WL STARTED LOADING SHUTTLE #5 AT APPROX 1230 HRS, AND FINISHED LOADING SHUTTLE #5 AT 1300 HRS. ELMER (WESTON) SAID SHUTTLE #4, LOADED W/ SEDIMENT, IS HARD-A-GROUND JUST NORTH OF THE DREDGE BARGE. BOTH BUSH BOATS COULD NOT MOVE THE #4 SHUTTLE.

1335 WL FINALLY MOVED THE #4 SHUTTLE FROM IT'S STUCK POSITION FROM BEHIND THE DREDGE BARGE.

1510 WL STARTS DREDGING. START LOADING SHUTTLE #6.

1544 STOP DREDGING. SHUTTLE #6 FULL.

1557 START DREDGING. START SHUTTLE #7. WL STILL DREDGING IN THE SAME AREA AS THE STARTED YESTERDAY AFTERNOON. WL CONTINUES TO DREDGE FOR FLOTATION IN THIS AREA.

8/9/07 THURSDAY

1608 WL IS HAVING PROBLEMS AGAIN MOVING THE SHUTTLE BARGE (SHUTTLE #6) IN AN AREA JUST NORTH OF THE WL DREDGE BARGE. APPARENTLY THERE IS A HIGH SPOT IN THIS AREA.

1622 STOP DREDGING. SHUTTLE #7 FULL.

1630 WL STARTS GREASING EXCAVATOR. A. KIEL HEARD THAT DUMP SCOW CHANGE OUT TO OCCUR SOON.

1650 A. KIEL & GARY (WESTON) START TURBIDITY SAMPLING. WL MOVED THE DREDGE BARGE BACK (NORTH) APPROX. 15' IN ORDER TO REMOVE THE WING-ROW / SEDIMENT BUILD-UP (WHICH WILL START TOMORROW).

1730 A. KIEL, EC & WL ASHORE.

8/10/07 FRIDAY

0610 A. KIEL, EC AND WL CREW ARRIVE ON THE DREDGE BARGE.

0630 WL STARTS DREDGING. START SHUTTLE #1. WL STARTS DREDGING IN LANES G & H APPROX STATION 2+90. WL MOVED BACK (NORTH) YESTERDAY IN ORDER TO START REMOVING THE WIND-ROW/BUILD-UP TODAY.

0703 STOP DREDGING. SHUTTLE #1 FULL. WL CONTINUE DREDGING FOR DRAFT IN THE PRESENT DREDGE AREA.

0713 START DREDGING. START SHUTTLE #2.

0739 STOP DREDGING. START MOVING DREDGE BARGE BACK (NORTHWARD) TO FURTHER CLEAN-UP/REMOVE WIND-ROW/BUILD-UP.

0745 START DREDGING. CONTINUE FILLING SHUTTLE #2.

0800 STOP DREDGING. SHUTTLE #2 FULL.

0821 START DREDGING. START SHUTTLE #3. WL CONTINUE REMOVING WIND-ROW/BUILD-UP. DREDGING FOR DRAFT.

0856 STOP DREDGING. SHUTTLE #3 FULL.
START MOVING ~~FOR~~ WORKING TURBIDITY CURTAIN.

0915 STOP MOVING TURBIDITY CURTAIN.
THERE IS A SMALL OPENING ALONG THE SHORELINE AT THE EAST END, WHICH WILL CLOSED LATER.

0954 START DREDGING. START SHUTTLE #4.

1038 STOP DREDGING. SHUTTLE #4 FULL.

1653 WL STARTS MOVING THE DREDGE BARGE NORTHEAST.

1057 WL STOP MOVING BARGE AND WORKING TURBIDITY CURTAIN.

1130 START DREDGING. SHUTTLE #5.

1142 A. KIEL ASHORE.

1330 A. KIEL BACK ON DREDGE BARGE. ASSUMED STOP DREDGING TIME FOR SHUTTLE #5 IS 1200 HRS.
WL PRESENTLY LOADING SHUTTLE #6. SHUTTLE WAS APPROXIMATELY ½ FULL UPON A. KIEL'S ARRIVAL.

ARRIVE ON THE

SHUTTLE #1. WL

APPROX STATION

YESTERDAY IN

THE WIND-ROW)

WL CONTINUE

RESENT DREDGE AREA.

TLE #2.

REDGE BARGE BACK

N-UP/REMOVE

FILLING SHUTTLE #2.

TTLE #3. WL CONTINUE

. DREDGING FOR

FULL.

RBIDITY CURTAIN.

TAIN.

ALONG THE SHORELINE

WILL CLOSED CATCH.

TLE #4.

FULL.

GE BARGE NORTHEAST

RKING TURBIDITY CURTAIN

. ASSUMED STOP

S IS 1200 HRS.

E #6, SHUTTLE WAS

KIEL'S ARRIVAL.

8/10/07 FRIDAY

1435 START DREDGING. START SHUTTLE #7. A. KIEL AND E. VAN WAGNER JUST FINISHED TAKING PICTURES OF THE WL AND MCM DREDGING ACTIVITIES FOR THE ERA.

1445 WL REMOVING THE CONCRETE ~~BUNKERS~~ PILINGS X. THE FOOTER PORTION OF THESE CONCRETE PILINGS ARE APPROXIMATELY 6" INTO THE SEDIMENT.

1505 STOP DREDGING. SHUTTLE #7 FULL.

1511 START DREDGING. SHUTTLE #7 NOT FULL. WL JUST MOVED SHUTTLE #7 FROM PORT TO STARBOARD SIDE OF BARGE.

1522 STOP DREDGING. SHUTTLE #7 FULL.

1605 START TURBIDITY SAMPLING WITH GARY (WESTON)

1630 A. KIEL BACK ON WL DREDGE BARGE.

1633 START DREDGING. START SHUTTLE #8.

1712 STOP DREDGING SHUTTLE #8 FULL. LAST SHUTTLE BARGE TO BE LOADED TODAY.

A. KIEL INFORMED THAT WL WILL WORK TIL NOON ON SATURDAY, MCM WILL WORK TIL 1400 HRS ON SATURDAY, NO WORK ON SUNDAY. MCM WILL RESUME WORK ON MIDNIGHT (SUNDAY NIGHT).

1725 SHUTTLE #8 DEPARTS WL DREDGE BARGE. WL CREW STARTS TO CLEANUP EXCAVATOR.

1740 A. KIEL ASHORE

8/11/07 SATURDAY

0608 A. KIEL, EC (DERRICK) AND WL CREW ON DREDGE BARGE.

0625 A. KIEL INFORMED JEREMY THAT THE CONCRETE PILINGS REMOVED YESTERDAY ARE TO BE REMOVED FROM THE SHORELINE AND PLACED IN THE SHUTTLE BARGE. A. KIEL SAID IT DOESN'T HAVE TO BE DONE RIGHT NOW, BUT IT HAS TO BE DONE.

0630 START DREDGING. START SHUTTLE #1.

A. KIEL INFORMED DERRICK ABOUT REMOVING THE CONCRETE PILINGS FROM THE SHORELINE AND PLACING THEM IN THE SHUTTLE. DERRICK ASKED IF A. KIEL INFORMED JEREMY, A. KIEL SAID YES. DERRICK SAID HE'LL TAKE CARE OF IT.

WL CONTINUE DREDGING IN THE VICINITY OF LANES F AND G AT STATION 2+00.

0723 STOP DREDGING. SHUTTLE #1 FULL.

0725 SKIP (EC) ASKED ANDY (WESTON) IF WE SHOULD DREDGE TO THE CATTAILS OR DREDGE LIMITS. ANDY SAID ~~HE~~ TALKED TO CHRIS ABOUT A WEEK OR TWO AGO & ~~SAID~~ (G.W.) DREDGE LIMITS WERE ASSUMED TO BE THE CATTAILS. ~~A. KIEL~~ (C.K.) A. KIEL INFORMED EC TO DREDGE TO THE CATTAILS. A. KIEL CALLED ANNETTE, ANNETTE SAID SHE TALKED TO CHRIS A FEW DAYS AGO AND DREDGE LIMITS SHOULD BE TO THE DESIGNED LIMITS, NOT THE CATTAILS.

0730 A. KIEL INFORMED SKIP, DERRICK AND JEREMY TO DREDGE TO THE DESIGNED LIMITS, NOT THE CATTAILS.

0732 CHRIS LANTINGA CALLED A. KIEL BACK. CHRIS SAID TO DREDGE TO THE DESIGNED LIMITS AND NOT THE CATTAILS.

A. KIEL ALSO INFORMED CHRIS THAT EC/WL WILL "TAKE CARE OF" THE CONCRETE PILINGS ON

8/11/07 SATURDAY

THE SHORELINE.

0735 START DREDGING. START SHUTTLE # 2.

0803 STOP DREDGING. MOVE DREDGE BARGE ~~[illegible]~~ ~~TO REMOVE [illegible]~~ SOUTH TO APPROX LANE 6 (EAST SIDE) NEAR STATION 2+50 TO 2+75.

0810 START DREDGING. CONT FILLING SHUTTLE # 2.

0836 STOP DREDGING. SHUTTLE #2 FULL.

0845 START DREDGING. (SHUTTLE #3 START)

WATER ELEVATION PRESENTLY AT 601.1.

0920 ANDY K. & GARY COLLECT TURBIDITY MEASUREMENTS.

0934 STOP DREDGING. SHUTTLE #3 FULL.

0947 A. KIEL BACK ON WL BARGE.

0953 START MOVING BARGE

1005 STOP MOVING BARGE

BARGE MOVED APPROX 40' SOUTH.

1012 START DREDGING. START SHUTTLE # 4

1045 STOP DREDGING. SHUTTLE # 4 FULL.

ONE PICTURE TAKEN OF SMALL EXCAVATION IN EAST HALF OF LANE 6, APPROX STATION 3+15. JEREMY (WL OPERATOR) SAID THE EXCAVATION IS WITHIN A FEW (1 OR 2) INCHES OF PRINT/DESIGN GRADE.

1100 A. KIEL INFORMED THAT SHUTTLE # 4 CANNOT BE MOVED BECAUSE OF LOW TIDE. JEREMY INFORMED A. KIEL THAT THE PRESENT EXTENT OF EXCAVATION (UP TO THE CATTAILS AT STATION [APPROX] 2+50, EAST SIDE OF LANE 6) IS NOT THE EXTENT OF EXCAVATION ON HIS COMPUTER. THE EXTENT OF EXCAVATION ON HIS COMPUTER IS APPROX. 6 FEET INTO THE CATTAILS. JEREMY WILL CONTACT HIS OFFICE TO MAKE SURE HIS COMPUTER EXTENT OF DREDGING IS ACCURATE.

1140 SHUTTLE #4 EN ROUTE TO S6 DREDGE BARGE. A. KIEL ASHORE.

CREW ON DREDGE

THE CONCRETE
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8/13/07 MONDAY

0607 A. KIEL, EC AND WL CREW ON BOARD.

0632 START DREDGING. START SHUTTLE #1. DREDGING ALONG THE EXTENT OF DREDGE LIMITS NEAR EASTERN HALF OF LANE 6, NEAR STA. 2+75.

0711 STOP DREDGING. SHUTTLE #1 FULL.

0722 START DREDGING. START SHUTTLE #2.

0755 STOP DREDGING. SHUTTLE #2 FULL.

WE START FUELING THE EXCAVATOR WHILE WAITING FOR AN EMPTY SHUTTLE TO RETURN.

0816 CRA IN THE BAY TO COLLECT SEDIMENT SAMPLES. CRA PRESENTLY IN THE VICINITY OF THE MCM 1A DREDGE LANE.

0937 START DREDGING. START SHUTTLE #3.

0955 A. KIEL & E. VANWACHER OBSERVED THE CRA SEDIMENT SAMPLING ACTIVITIES. KYLE (CRA) SAID SAMPLES SO FAR HAVE LITTLE TO NO SEDIMENT (ORGANICS). IT'S MOSTLY SAND.

1010 STOP DREDGING. SHUTTLE #3 FULL.

1024 START DREDGING. START SHUTTLE #4.

1034 START MOVING BARGE FORWARD (SOUTH)

1038 STOP MOVING BARGE. ~~CONT. FILLING~~ (EK) START DREDGING. CONT. FILLING SHUTTLE #4.

1057 A. KIEL OBSERVED THE WL EXCAVATOR COMPUTER SCREEN. JEREMY (WL) ASKED IF WE ARE DREDGING TO THE CUTTAKS (ALONG EASTERN BOUNDARY OF THE OPEN AREA / EASTERN PORTION OF LANE 6.) OR TO THE ~~DREDGE~~ (EK) HORIZONTAL DESIGNED DREDGE LIMITS.

1103 WL PRESENTLY DREDGING TO DESIGNED DEPTH NEAR DREDGE LANE 6 (CENTER LINE) STATION 3+60. THE PRESENT EXCAVATION IS DRY, AND WHITE SAND OBSERVED AT THE BOTTOM OF THE EXCAVATION.

A. KIEL INFORMED DERRICK (EC) OF THE CONVERSATION W/ JEREMY. ~~A. KIEL INFORM~~ (EK)

8/13/07 MONDAY

1108 A. KIEL CALLED CHRIS LANTNER TO CONFIRM WE ARE DREDGING TO THE HORIZONTAL EXTENT OF THE DESIGNED LIMITS AND NOT TO THE CATTAILS. CHRIS SAID YES, AND HE WILL BE ON SITE LATER TODAY.

1116 STOP DREDGING. SHUTTLE #4 FULL.

1124 A. KIEL INFORMED DERRICK AND JEREMY THAT WE ARE DREDGING TO THE DESIGN LIMITS, NOT THE CATTAILS.

1145 A. KIEL ASHORE

1235 A. KIEL BACK ON BARGE. INL PROSONTEY STANTING TO MOVE FULL SHUTTLE BARGE (#5). ASSUME START TIME FOR SHUTTLE #5 AT 1205 HRS, AND STOP TIME AT 1235 HRS.

1312 START DREDGING. START LOADING SHUTTLE #6.

1355 STOP DREDGING. SHUTTLE #6 FULL.

1409 START DREDGING - START SHUTTLE #7

1440 CHRIS LANTNER INFORMED A. KIEL THAT THE GROUP OF PEOPLE SOUTH OF THE DREDGE AREA ARE THE SHORELINE RESTORATION PERSONNEL.

1529 STOP DREDGING. SHUTTLE #7 FULL.

1558 START ~~DREDGING. START SHUTTLE #8.~~ MOVING DREDGE BARGE AND WORKING CURTAIN. MCM STARTS OPENING THE FIXED WORKING TURBIDITY CURTAIN FOR THE DUMP SCOW CHANGE-OUT.

1606 STOP MOVING BARGE. START DREDGING (SHUTTLE #8).

1622 STOP DREDGING. START MOVING THE DREDGE BARGE BACK (NORTH) TO REMOVE WIND-ROW / ALIGN-UP.

1630 STOP MOVING BARGE. START DREDGING. CONT. TO FILL SHUTTLE #8.

1638 STOP DREDGING. EC/WL CREW TALKING TO THE SHORELINE RESTORATION CONTRACTOR. THE SHORELINE RESTORATION CONTRACTOR IS BEGINNING TO SET-UP THEIR PIPELINE WHICH WILL FILL THE SOCKS WITH MATERIAL (SAND).

8/13/07 MONDAY

1645 START DREDGING. CONTINUE FILLING SHUTTLE #8.

1652 FIXED TURBIDITY CURTAIN CLOSED AND MCM CASON PRESENTLY RETURNING TO THE MCM DREDGE BARGE.

1735 STOP DREDGING. SHUTTLE #8 FULL.

1745 A. KIEL OFF BARGE.

Sault Ste Marie SAT. 6/30/07
Cannelton/USEPA weather: clear, windy, 60's
Elmer Van Wagner and Chris Lantinga (Weston)
Arrive @ bay & ride zodiac to dredge. Chris
and Elmer inspect/tour bay, silt curtain +
* Barge 56. MCM change out loaded barge,
and return w/empty barge.
0815 resume dredging
0836 Elmer & Chris to shore, Elmer drop
chris off + return to dredge barge
current water elevation = 600.50 ft
based on staff gauge near dredge barge installed by Enviroco
0846 Travis (Enviroco) borrow zodiac to run to
shore. Dredge move from Station 55 to
Station 72, resume dredging
* 0904 MCM change out shuttle
0944 MCM resume dredging
0947 current water elevation 600.30, large
freighter passed by bay
1000 dredging suspended, replacing/
repairing power cord to GPS reciever
located in dredge
1015 resume dredging
1018 dredging suspended, fix power cord attachment
1020 dredging resumes
1021 dredging suspended, Elmer suggest MCM
pull silt curtain to outside of barge to catch
sediment falling off bucket of dredge. They
are repositioning the silt boom to catch over
flow. (Elmer make suggestion to reposition curtain to Travis)
1026 MCM resume dredging
1031 water level elevation = 600.20 ft
1104 suspend dredging to refuel dredging crane and
grease clam bucket.
1130 shift change

SAT 6/30/07

Sault Ste Marie
Cannelton/USEPA weather: pt'ly cloudy windy 60's
1140 Adjust silt curtain
* 1145 MCM change out loaded barge
1200 water level on staff gauge = 600.50 ft
1210 barge back, readjusting silt curtain.
1213 ~~resume dredging~~
1215 MCM pulled spud on crane/dredge barge and moved forward to ~~60~~ SW station 60
~~Current dredge area is SW~~
- back note staff gauge installed by Envirocon is located approximately 30 feet south of dredge barge.
Envirocon had new shift personnel sign Plan of Day Crew assignment sheet. Topics covered crane operation slip/trip/fall, rigging, hoists rigging, wire rope.
1220 resume dredging
Dredging at Station 68
* 1324 Suspend dredging, prepare & remove shuttle barge to material scow
1330 water level based on Envirocon staff gauge is 600.70
1355 ~~resume dredging~~ shuttle barge back, resume dredging
1415 water level based on Envirocon staff gauge south of dredge barge is 600.40 ft
1445 MCM pulled spuds on crane/dredge barge and moved forward (west) to Station 70
1445 MCM suspend dredging, water level based on Envirocon staff gauge is 600.20 ft
Shuttle barge is full, waiting to switch out.
1500 MCM begin switchout of debris dump scow (pulling silt curtain back first). Replaced dump scow. Complete replacement, curtain replaced
* 1600 MCM remove full shuttle barge to dump scow.

Sault Ste. Marie SAT 6/30/07

(Cannelton/USEPA weather: partly cloudy, windy, choppy waters, 60's.
1634 Shuttle barge replaced w/ empty... resume dredging operations
* 1710 Suspend dredge, reposition barge. water level = 600.70 feet, based on staff gauge to south of barge.
1715 resume dredging, fixing/repositioning silt curtain along south side of dredge bay.
1720 Elmer + Travis take zodiac to check silt curtain out at mouth of bay, too rough to check, return to ~~shore~~ shore.
dredging suspended, take shuttle barge to debris dump scow.
** 1720 moved dredge to station 90
1816 return shuttle barge to dredge, repositioning silt curtain along south + north sides of barge.
1840 Envirocon shift change
1840 Chris Lantinga (Weston) on site
1840 water level on staff gauge to south of dredge is 600.30 ft
1900 Elmer leave site for day, Chris Lantinga on site until Diane Russel arrives

Aftanote:
No turbidity grabbed due to high wind + very choppy water.

Sault Ste. Marie SUN
7/1/07
Connelton/USEPA weather: 53°F, clear, slight breeze.

645 Elmer Van Wagner relieve Diane Russel (Weston)
Diane indicated the dredge jack line was badly frayed. MCM shut down at approximately 6:00 am to replace cable. Elmer mob to site operations trailer, nobody at trailer... trailer locked. Elmer fill Zodiac gasoline can & return to site

0810 Dredge operations resume with new shuttle barge.

0900 - Travis & Elmer (Enviroscan) to ~~Dredge 56~~ silt curtain (EUW) to inspect. Currently dredging station 131, moving to Station 151

Resume dredging

0930 dredging suspended, move shuttle barge to debris dump scow.

0940 Elmer & Travis return to dredge barge

1015 Shuttle barge return to dredge barge, dredging resuming @ Station 151

1030 Annette Dickinson at Bay to download water level data.

1040 water level based on staff gauge located south of barge is 600.20 ft

1053 suspend dredging, move shuttle barge to debris dump scow, and refuel dredge.

1130 shuttle return

Shift change out - NOON - MID NIGHT CREW on board

1142 water level from staff gauge is 600.40 ft

1147 resume dredging

1205 water level from staff gauge = 600.50 ft

1240 dredging suspended, switching shuttle barge,

1305 resume dredging, shuttle barge back.

SUNDAY
7/1/07

Sault Ste Marie
Cannelton/US EPA
Weather: partly cloudy 60's slight breeze.
1355 suspend dredging, transport shuttle to
* debris dump scow
1420 shuttle barge return, resume dredging.
1430 water level at staff gauge = 600.50 ft.
1450 trip out to Dredge 56 to inspect
1515 return to dredge barge
~~1540~~ Envirocon relief arrived at Approximately
1445, (Norm) replaced Travis (Envirocon). Travis left
Barge/Bay at 1525
1530 dredging suspended, moving full shuttle
* barge to Dredge 56
1548 Norm measured depth @ 4 ft below water
level, staff gauge measurement is 600.4 ft.
1600 shuttle barge return, resume dredging
* 1649 dredging suspended, moving full shuttle
barge to dredge 56 scow
We have moved to Station ~~156~~ 163
1721 shuttle barge return to dredge, MCM
adjust working curtain.
1728 resume dredging operations
1800 readjust working silt curtain
1832 suspend dredging, repair generator on dredge 56
1850 Andy Kiel arrive on site, Elmer pick
andy up @ dock, motor back to dredge, prep
for turbidity sampling.
1915 shuttle to dredge 56.
* 1945 shuttle return to dredge barge & resume
dredging. Andy Kiel notes contain turbidity measurements
→ Andy Kiel + Elmer return from turbidity measurements
2020, Elmer leave barge + bay for weekend.

Sault Ste Marie
Cannelton/USEPA

Tuesday/Wed.
7/10/07-7/11/07

2240 Elmer VanWagner (Weston Solutions) on site, releive Andy Kiel (Weston Solutions) Enviro con staff relieved by Ken McDowell. Dredging resuming by MCM.

2306 move to station 110, resume dredging

2325 dredging @ station 145

* 2340 dredging suspended, shuttle barge full, MCM change out crew

2400 N634127.51, E26904149.98 (GPS coord.) Ken McDowell having MCM sign in and discuss Health + Safety of dredging operation

0022 shuttle return from Dredge 56

resume dredging, checked water level in shuttle "pig pen", depth approximately 3 inches — staff gauge @ 600.20 ft

0054 pivot dredge to south side of lane

0059 water level 600.10 ft staff gauge

0130 water level 600.60 ft staff gauge

Empty shuttle barge docking with working shuttle barge. Working shuttle barge approximately 2/3 full

~~1338~~ 0135 suspend dredging, change out shuttle barge

* 0145 empty shuttle docked @ dredge, resume dredging while full shuttle transferred to dredge 56, readjust silt curtain @ dredge. shuttle barge "pig pen" water level is approximately 5 to 6 inches deep.

0200 water level 600.90 on staff gauge

0208 two confirmation dredge samples, lithology is sand. Reposition dredge to next station.

Move dredge to station 150

Cannelton Industries Wed. 7/11/07
Sault Ste. Marie, MI/USEPA
0225 water level on staff gauge 601.20 ft
0244 turbidity curtain floatation device are torn, at mouth of bay... winds picking up w/ white caps inside curtain.
0250 empty shuttle barge return, staff gauge water level at 601.40 ft
0300 pivot to north side of lane
0250-300 dredge suspend operations...
0300 dredge resume operations
*0305-310 switch out full barge w/empty
0310 resume dredging
0315 empty barge return
~~silt~~ EVW curtain torn from south shore
turbidity 0330 water level from staff gauge is 601.20 ft. Dredging suspended... MCM to readjust silt curtain and attempt to readjust turbidity curtain at beach.
▸ after note: ~~bar~~ empty barge has approximately 6 inches of standing water within "pig pen"
0338 resume dredging
0400 water level @ staff gauge is 601.60 ft
0410 MCM completed movement/readjustment of silt curtain + repaired turbidity curtain at beach/shoreline
0415 ~~pivot~~ EVW ~~pivoting~~ EVW dredge move forward to station 154, ~~resume dredging~~
0430 water level at staff gauge is 601.60 ft and resume dredging
0435-0442 switch out empty barge @ loaded barge, resume dredging
0440 start raining.
0530 water level @ staff gauge is ~~600.20 ft~~ EVW 602 ft.

Cannelton
Sault Ste. Marie, MI USEPA
Wed 7/11/07

0530 misting + rain.
0530 – dredging suspended, retreiving empty shuttle barge.
0550 resume dredging
high winds + rain
0605 waterlevel on staffgauge is 600.90ft
0600 pivot dredge to south
0615 Skip Simpson (Envirocon) boarded dredge.
MCM switching out full barge w/ empty.
0624 resume dredging, water level @ staff gauge is 600.90 ft, Skip Simpson (Envirocon) leave dredge. MCM having trouble controlling full shuttle barge en route to scow due to high wind + waves.
0640 full shuttle barge return to dredge, too rough + windy to manuever to scow.
0643 resume dredging
0646 suspend dredging
0700 Elmer leave ~~barge~~ barge for day

Cannelton Industries
Sault Ste Marie, MI/USEPA

Wed/Thursday
7/11-7/12/07

1045 Elmer VanWagner relieve Andy Kiel of Weston MCM Day shift on dredge barge, Ken McDowell (Enviro con) on dredge. MCM currently @ Station 190 dredging.

1120 MCM fueling crane & shift change

1132 N 634106.58, E 2690408 8.81 GPS location

1142 MCM reported dredging operation currently at station 197

All MCM personnel sign Health + Safety Plan, discuss crane hazards, buddy system, barricades, inclement weather, electrical shock emergency procedures

1200 resume dredging operations

0030 dredging halted full barge, change out
* barges, Ken McDowell off barge (Enviro con) to dock switched boats, water level @ staff gauge is 600.30 ft

0049 full barge moved to scow, empty barge replaced full barge, water on empty barge "pig pen" equals 4/10 ft.

0052 resume dredging

~~1315~~ 0115 EDW water level @ staff gauge is 600.70 ft

~~1330~~ EDW water level @ staff gauge is 600.40 ft
0130^

0133 moving ahead to Station 207

0135 resume dredging

0153 dredging suspended, waiting to change out
*full barge.

0224 barges changed out, full barge to scow readjust silt curtain in work area.

0230 water level @ 600.60 ft (staff gauge), resume dredging

0300 water level @ staff gauge is 600.50 ft
after note - water level w/in Empty shuttle barge

Cannelton Industries
Sault Ste Marie, MI / USEPA — Thursday 7/12/07

is approximately 3 inches deep, w/ at least 6 inches of sand/silt also.

*0304 dredging suspended, changing barges. full barge to scow

0345 water level at staff gauge is 600.40 ft, empty shuttle barge return

weather: sprinkles,

0347 dredging resume, empty shuttle barge w/ approximately 4/10 ft water in "pig pen"

0435 weather: rain

0445 water level @ staff gauge is 600.60 ft

0455 pivot dredge to north

0518 dredging suspended, change out fuel barge

*with empty barge

0518 pouring rain

0530 resume dredging

0550 water level @ staff gauge 600.10 ft

0550 stopped raining

0615 Skip Simpson @ dredge (Envirocon)

0625 Skip Simpson (Envirocon) leave dredge

0628 water level @ staff gauge 599.70 ft

0630 ~~move ahead~~ attempted to move ahead. dredge barge stuck, MCM mobilize out to dredge 56 to retreive empty shuttle barge.

0657 water level @ staff gauge = 600.30 ft, empty shuttle barge back @ dredge.

0710 Envirocon personell switch out

silt curtain rearranged

0720: 33½ inches = water level @ surveyed ~~staff gauge~~ stilling well

Diane Russel relieve Elmer

0735 Elmer off site

end day -

Cannelton
Sault Ste. Marie, MI / USEPA

Thursday / Friday
7/12 – 7/13/07

1040 Elmer Van Wagner relieve (weston) Andy Kiel.
Ken McDowell relieve Norm Clingan (Envirocon). All operations performing as normal.
1113 Water level on staff gauge 600.40 ft
1122 dredging suspended, refuel crane, shift change for MCM. Andy Kiel of Weston indicated at beginning of this shift Station 269 is location
1200 GPS location N 634094.51, E 26904019.13
*1200 - transfer full shuttle barge to scow, water level is 600.80 ft at staff gauge
0030 water level is 600.70 ft @ staff gauge
0030 empty shuttle barge return
0040 resume dredging
0055 water level is 600.70 ft staff gauge.
0126 water level is 600.80 ft staff gauge
0145 dredging suspended, moving full shuttle barge to scow
0230 empty barge back, water level @ 600.80 @ staff gauge.
0236 resume dredging
0358 - water level @ staff gauge 600.60 ft.
back note: empty shuttle barge had 6 inches water within "pig pen"
0430 water level @ 600.40 ft
0455 water level @ 600.2 ft @ staff gauge
*0530 switching full shuttle with empty shuttle barge
0530 water level 599.90 ft
0530 dredging suspended due to change out of barges, empty shuttle barge has approximately 6 inches of water within "pig pen"
~~0548 resume dredging~~
0557 water level ≈ 600.0 ft
Dredging suspended, MCM claim need different

Cannelton, Industries
Sault Ste. Marie, MI / USEPA

FRIDAY
7/13/07

clam bucket needed due to rocks encountered within sand.

0620 Skip Simpson (Envirocon) on dredge

0626 Skip Simpson leave dredge (Envirocon)

0626 MCM ~~taking~~ retrieving empty barge ~~to~~ from dredge 56 to ~~retrieve~~ transport clam bucket with teeth to dredge

0626 water level at 600.10 feet @ staff gauge

0647 Chris Lantinga (Weston) on site

0651 Ken McDowell (Envirocon) leave barge

0658 Envirocon relief on barge

0700 water level = 600.30 feet from staff gauge

0700 Diane Russel (Weston) on site, retrieve water levels from stilling well 33½ inches to water surface.

0715 Elmer & Chris off site

SATURDAY
7/14/07

Cannelton Industries
SAULT STE MARIE, MI / USEPA

0650 Elmer VanWagner (Weston) on site, Diane Russell (Weston) & Elmer collect water levels @ stilling well. Diane relieved of shift — GW
currently stuck @ Station 300, MCM performing maintenance on clam bucket. Envirocon staff Brett Bishop on shift. Skip Simpson was on dredge from 7:00 AM - 7:45 AM — GW
weather: rain 50's. Water level is currently at 600.20 ft — GW
*0752 shuttle barge being transferred to scow to unload, — GW
0832 shuttle barge back to dredge, resume dredging — GW
0855 water level = 600.70 ft — GW
0909 station 320.6 after note, this is station location as of 0630 this morning — GW
0930 water level 600.70 ft — GW
0944 transfer loaded shuttle barge to scow, *dredging suspended — GW
1016 shuttle barge (empty) back, resume dredging.
1032 water level @ staff gauge 600.4 ft
1109 refuel crane, dredging suspended — GW
1136 shift change for MCM personell — GW
1137 water level @ staff gauge is 600.6 ft — GW
1154 resume dredging — GW
1203 water level 600.8 ft — GW
1226 dredging suspended. MCM Supervisor Bob Everitt has decided to move dredge to Dredge Lane 4, due to slow productivity of current Lane 3. (rocks are slowing down production). Start down rigging dredge in preparation of move. — GW
1240 Elmer leave dredge to pick up propane for trailer heater — GW

Cannelton Industries
Sault Ste Marie, MI / USEPA

SATURDAY
7/14/07

1330 Elmer return to dredge w/ propane cylinders.
1401 water level is 600.4 ft
1406 MCM completed maintenance / repairs on clam bucket, begin moving dredge to new lane.
1420 dredge setup on Lane 4, -075 Station, readjust working silt curtain
1432 GPS N 634083.69, E 26904370.85 (new Lane 4) Norm Clingan (Envirocon) on dredge.
1435 water level 600.4 ft
Dredge Lane 4 start at -75, access dredging.
1442 Brett Bishop (Envirocon) leave barge for day.
1538 working silt curtain back in place.
1540 Start work/dredging Lane 4
1600 water level @ staff gauge is 600.9
* 1600 dredging suspended, empty shuttle barge
1624 empty shuttle barge back @ dredge barge.
1625 resume dredging
1640 pivot dredge to south side of Lane 4
1642 water level @ 600.9 ft
1645 resume dredging
1705 water level @ staff gauge is 600.6 ft
1715 move forward to Station EW -61
1720 resume dredging
1740 water level 600.8 ft
* 1800 dredging suspended, remove loaded shuttle barge
1808 water level is at 600.8 ft
1820 empty shuttle barge back at dredge
1825 resume dredging
1910 Diane Russell at dock, Elmer to pick up.
1920 turbidity readings 204, 46° 29.578, 084° 23.268, turbidity 21.2 NTU; 205, 46° 29.544, 84° 23.271 turbidity 24.8 NTU

13

SATURDAY
7/14/07

Cannelton
Sault Ste Marie/USEPA
206 46°29.598', 84°23.235 turbidity=
10.72 NTU
1930 Elmer relieved by Diane Russell of Westons.
End day

Cannelto
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Dredge
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4/07

Cannelton Industries
Sault Ste Marie, MI/USEPA

SUNDAY
7/15/07

0645 Elmer VanWagner (Weston) relieve Diane Russell. Dredge is operating with bucket w/ teeth (hard sand encountered) Digging Station -55.
0713 MCM dredge moved ahead to Station -20
0734 water level is 600.5 ft
0754 MCM change out dredge bucket, suspend dredging
*0754 shuttle barge full transfer to scow and transfer port-o-john to scow to empty.
0822 water level at 600.6 ft
0900 Rudy @ MCM Leaving dry dock with empty scow.
0900 MCM open turbidity curtain for scow change out.
0915 water level @ staff gauge is 600.7 ft
0917 Skip Simpson on board dredge barge.
After note: 0700 Brett Bishop (Envirocon) on dredge.
0954 Skip Simpson (Envirocon) leave barge
1000 water level staff gauge is 600.7 ft
1005 new (empty) scow arrive, change out.
1055 close turbidity curtain
1106 new (empty) shuttle barge on way to dredge barge.
1116 shuttle change out complete
1119 water level is 600.6 ft
1124 shift change for MCM
1145 change boom cable on dredge
1259 Brett Bishop leave barge for lunch
1310 Elmer to do turbidity readings
mark 207 N46° 29.565, W84° 23.297 turbidity = 25.8 NTU
mark 208 N46° 29.545, W84° 23.267' turbidity = 24.0 NTU
mark 209 N46° 29.620, W84° 20.231 turbidity 9.56 NTU

Sunday
7/15/07

Cannelton Industries

Sault Ste Marie, MI / USEPA

mark 210 N46° 29.822 , W84° 23.346 turbidity 2.61
mark 211 N46° 29.829 W84° 23.852 turbidity 1.94
mark 212 N46° 29.789 , W84° 23.376 turbidity 1.29
mark 213 N46° 29.801 , W84° 23.404 turbidity 1.56

1409 Elmer complete turbidity readings, Norm Clingan (Envirocon) on barge
1424 Brett Bishop (Envirocon) leave barge for day
1430 boom cable replacement completed
1430 - change clamshell bucket with clam shell w/ teeth bucket
1459 begin dredging
1539 water level at 600.6 ft
1623 water level at 600.6 ft
after not Station -20 started at 0754
*1636 dredging suspended, full shuttle barge moving barge to scow
1658 empty shuttle barge return
1700 resume dredging
1710 Pivot to southside
1730 water level is 600.6 ft
1830 water level is 600.7 ft
1837 dredging suspended, transport full *shuttle barge to scow
1900 Diane Russel relieves Elmer,
1905 empty shuttle barge back to dredge
1905 Elmer leaves dredge for day

Cannelton
Sault Ste M
0645 Elm
o/ Weston
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0720 mov
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*813 susp
~~822 resu~~
825 Env
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0838 wa
0842 re
1000
*1013 su
1025 re
1048
dredge
1050 re
1110 E
repair
1115 su
1123 S
*1228 cl
1306
1311
1324
1341
Bishop

Cannelton Industries — Monday

Sault Ste Marie, MI / USEPA — 7/16/07

0645 Elmer VanWagner (Weston) relieve Diane Russel of Weston. Currently dredge is at Station 28, due to redredging. Dredging bucket is bucket w/teeth

0720 move ahead to Station 28

weather: 47° clear

800 water level is 600.6 ft @ staff gauge

*813 suspend dredging, switch out loaded barge.

~~822 resume dredging w/empty shuttle barge.~~

825 Envirocon switch out personnel. Ken McDowell relieved by Brett Bishop.

0838 water level is 600.8 ft

0842 resume dredging

1000 water level 600.4 ft

*1013 suspend dredging, switch out shuttle barge

1025 resume dredging

1048 water level 600.3 ft

dredge ~~moving forward to Station #~~ pivot to south

1050 resume dredging

1110 Elmer to shore to take boat motor for repair

1115 suspend dredging, fuel crane.

1123 Shift change, readjust silt curtain

*1228 change out full shuttle barge

1306 resume dredging

1311 water level = 600.6 ft

1324 NCM move forward to Station 30

1341 Norm Clingan (Envirocon) on dredge, Brett Bishop off dredge

1426 water level is 600.4 ft

*1427 suspend dredging, transfer loaded shuttle to dredge 56

1455 shuttle back @ barge, adjust working silt curtain, resume dredging

Cannelton Industries
Sault Ste Marie, MI / USEPA

Monday
7/16/07

1530 600.5 ft is water level — EP
1533 Andy Kiel @ dock with boat motor Elmer dropped off @ repair shop — EP
1535 pivot to south — EP
1540 Andy Kiel (Weston) on dredge — EP
1550 Elmer VanWagner off dredge for shift. — EP

Tuesday
7/17/07

Cannelton Industries
Sault Ste Marie MI / USEPA
0645 Elmer VanWagner (Weston) on site to relieve Diane Russell.
0715-0725 MCM suspend dredging to eat food.
0726 resume dredging activities
0746 suspend dredging
0750 resume dredging - pulling up boulders
0800 suspend dredging, opened turbidity ~~curtain~~ curtain.
815 changing out scow
0835 scow changeout complete
0850 turbidity curtain replaced
0900 resume dredging
0944 water level 600.2 ft
0955 pivot to north
1014 MCM readjust silt curtain Enviricon
shift change Ken McDowell lead barge, Brett Bishop on barge
~~1109 switch~~
* 1047 fixing working curtain, change out fuel shuttle barge; fuel crane, grease bucket. ~~full stop~~ empty shuttle has no water in "pripen". no dredging
1117 working curtain fixed
1117 crane fueled
shift change
1149 MCM resume dredging
1200 water level 600.6 ft
1213 move forward, resume dredging
1230-1240 Elmer meet Annette Dickinson @ dock transfer video camera to Elmer
1240 water level 600.4 ft
1330 water level 600.3 ft
* 1330 suspend dredging for switching full shuttle barge.

Tuesday
7/17/07

Cannelton Industries
Sault Ste. Marie/MI - USEPA
turbidity readings: mark 222 N 46° 29.545, W 84° 23.317
turbidity = 26.1 NTU
1350 MCM switching full shuttle with empty, dredging suspended, MCM also switching out dredge bucket to clam shell bucket.
1400 Envirocon staff changeout Norm Clingan switch w/ Brett Bishop
mark 223 N 46° 29.791, W 84° 23.310 turbidity = 7.06 NTU. mark 224 N46° 29.766, W84° 23.409 turbidity is 2.41 NTU mark 225, N46° 29.766', W84 23.444 turbidity 1.12 NTU. mark 226 N46° 29.792, W84 23.377 turbidity = 0.95 mark 227 N46° 29.820, W84° 23.387 turbidity 0.71 NTU. 228 N46° 29.567, W84° 23.362 turbidity = 30.7 NTU
1425 Elmer completes turbidity readings. MCM adding cable to spud bars, MCM is planning on repairing turbidity curtain
1445 Andy Kiel (Weston) relieve Elmer from Shift.
1500 Elmer leave site

7

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84 23.377
4° 23.387
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MCM
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Shift.

Wednesday
7/18/07

Cannelton Industries
Sault Ste. Marie, MI / USEPA
0700 Elmer VanWagner relieve Diane Russell (Weston) @ shift.
currently dredging Station 88 w/ dredge bucket with teeth.
Skip Simpson (Environcon) leave dredge @ 0715
0813 suspend dredging, shuttle change (full) replace shuttle w/ empty
0821 resume dredging
0840 MCM fixing / preparing new silt curtain for next lane of dredging. Dredging @ Lane 4 still being conducted at same time
0907 Wayne from MCM checked dredge bottom elevations. He identified that the staff gauges / elevations were accurate
1002 Environcon switching shifts, Ted McDowell switch out w/ Brett Bishop
1005 dredging suspended, shuttle change out
1023 Water level 600.5 ft
1034 resume dredging
1042 pivot north
1045 MCM complete repair of working silt curtain for next Lane.
1121 Suspend dredging, fuel crane, shift change
1129 Elmer + Brett check turbidity curtain
1200 turbidity curtain needs to be leshed together on north side of scow, also along north side of scow turbidity curtain needs to be cinched up.
1200 Elmer drop Brett off @ dock to retrieve new Dredge line maps
1200 dredging resumes
1325 Elmer collect turbidity readings
mark 229 N46° 29.547, W 84° 23.296 turbidity = 23.0 NTU
mark 230 N46° 29.561, W84° 23.289 turbidity = 22.7 NTU

wednesday
7/18/07

Cannelton Industries
Sault Ste Marie, MI / USEPA

mark 231 N46° 29.600',	W 84° 23.254'	turbidity = 13.
mark 232 N46° 29.737,	W 84° 23.295	turbidity = 6.1
mark 233 N46° 29.809	W 84° 23.360	turbidity = 0.9
mark 234 N46° 29.819,	W 84° 23.377	turbidity = 1.3
mark 235 N46° 29.762	W 84° 23.435	turbidity = 0.36
mark 236 N46° 29.774	W 84° 23.456	turbidity = 1.04
~~mark 237 N46°~~	~~W 84°~~	

1406 Elmer complete turbidity readings, MCM
*change out shuttle barge
1409 resume dredging
Envirocon change out staff Brett Bishop replaced by Norm Clingan
1413 Water level = 600.3 ft
1400-1443 Bob Everitt & Norm Clingan (Envirocon) checked turbidity curtain out by scow, seam ~~is~~ EW needs to be re-tied.
1445 move ahead
1445-1454 MCM placing silt curtain at location to be dredged next (Lane 1A)
1455 Weston relieved at dock (Andy Kiel)
1500 Elmer depart barge & leave site

=107

turbidity=13.1
turbidity=6.10
turbidity: 0.91
turbidity=1.34
turbidity 0.36
turbidity=1.04

MCM

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Cannelton Industries
Sault Ste Marie, MI / USEPA

Thursday
7/19/07

1000 Elmer VanWagner (Weston) @ dredge barge to get information on start time. No night shift (previous evening) due to repairs of Manitowoc crane on Dredge 56.

Tried getting in contact w/ Bob Everitt of MCM no answer left message. Three MCM guys moved shuttle barge from Dredge 56 to dredge barge & left site. Called Annette Dickinson re: start time. She only was reporting ~~an~~ a "sometime this morning" start time that Skip Simpson had told her.

1030 Elmer off Barge & mob to offloading pads

1155 Elmer back on Barge, day crew on barge, MCM begin dredging @ 1200. Envirocon staff on board, had to leave barge to retrieve computer.

Bob Everitt indicated the reason for the down time w/ Manitowoc crane was brake on boom was compromised. It was repaired back to working order this morning

1216 water level 601.2 ft on staff gauge.

1237 water level = 601.0 on staff gauge

1300 water level = 600.7 ft

weather = 70's very windy

* 1304 suspend dredging ... shuttle barge change out

currently dredging Station 105

1320 light rain, wind

1321 water level 600.6 ft

1325 Norm Clingan (Envirocon) on barge

1330 shuttle changeout complete

resume dredging

1341 water level = 600.5 ft

light rain stopped ... wind shifted from NW to N

1348 dredging suspended due to lightning

Thursday
7/19/07

Cannelton Industries

Sault Ste Marie, MI / USEPA

1402 resume dredging

1403 water level is 600.5 ft

1431 water level is 600.6 ft, pivot to south side.

1445 water level is 600.7 ft, wind from the NE.

1446 MCM opening turbidity curtain for second dredge company.

1447 pivot to south

1450 Andy Kiel (Weston) @ dock to relieve Elmer.

1500 Elmer off barge for day... rain developing

Friday
7/20/07

Cannelton Industries
Sault Ste Marie, MI / USEPA
0645 Elmer VanWagner (Weston) on site
MCM resume dredging, Andy Kiel (Weston) on site.
Andy will be conducting oversight of White Lake dredging.
Wayne (MCM) is conducting elevation survey.
weather: clear, 50's slight breeze from north
Currently dredging Station 126
0745 suspend dredging due to elevation survey by MCM
0752 water level is 600.8 ft
0756 resume dredging
0831 water level = 600.6 ft
AFTER NOTE: Envirocon Ken McDowell is on barge
0924 suspend dredging, shuttle barge change
* out. Water level is 600.3 ft
0930 resume dredging
0948 Envirocon shift change. Ken McDowell relieved by Vern (Envirocon)
1119 water level = 600.7 ft
1120 ready for shift change for MCM
1151 ~~1200~~ resume dredging
1200 move forward
1201 water level ~~599.9 ft~~ is 600.9 ft
* 1215 switching full shuttle w/ empty shuttle. Dredging suspended.
1228 resume dredging, readjust silt curtain
1234 water level is 600.7 ft
1302 switch out shuttle barge (full) dredging suspended.
1304 water level is 600.7 ft
1312 shuttle from dredge (MCM) not empty yet,
* full shuttle is being pushed out to Dredge 56.
1321 empty shuttle returning ~~from~~ to Dredge 56.

150 Cannelton Industries

Friday
7/20/07

Sault Ste Marie, MI

1330 resume dredging

1413 Elmer + Andy Kriel collect turbidity readings
mark 246 N 46° 29.566', W 84. 23.312, turbidity = 39.2 NTU
mark 247 N 46° 29.589', W 84, 23.288, turbidity = 14.0 NTU
mark 248 N 46° 29.684', W 84, 23.261, turbidity = 21.5 NTU
mark 249 N 46° 29.747', W 84, 23.324, turbidity = 9.64 NTU

1425 water level is 600.7 ft

1500 switch out shuttle barge, suspend dredging

1503 resume dredging, pivot to south.

1507 water level is 600.8

1526 water level is 600.7

1528 move forward

1530 Station 141 is dredge location

1557 waterlevel is 600.6 ft

* 1600 Barge change out (full) replace w/ empty...
dredging suspended

1615 resume dredging

1625 Elmer meet Chris Lantinger + Kelly Hudson
(Weston) at parking lot.

1630 Elmer leave site

Cannelton Industries, Sault Ste Marie, MI / USEPA

Monday 7/23/07

0800 Elmer VanWagner (Weston), Envirocon (Vern Musser) and MCM on dredge.

0824 begin dredging. Weston boat (Zodiac) has leak in hull, resulting in a deflating of the hull. Andy Kiel (Weston) identified that he called Annette Dickinson regarding the issue.

0827 Waterlevel at staff gauge is 600.2 ft

Currently redredging between Lane 3 + Lane 4 Station 75

0845 Elmer to White Lake Barge to pick up Andy Kiel (Weston) Andy + Elmer to drag zodiac to parking area for repairs

*1037 stopped dredge, change out shuttle barge

1045 resume dredging

1200 water level 600.4 ft

1242 water level 600.5 ft

1242 move forward

Aftermath: Elmer + Andy lugged the zodiac to the parking lot + met Ken of MCM w/ his pickup truck. Ken, Elmer + Andy loaded zodiac into pickup truck for repair. Andy + Elmer mounted engine, gas tank + emergency pack onto flat bottom boat that was on shore. We asked Bob Everitt if we could use this flat bottom boat until the zodiac is repaired... he said yes.

1306 600.5 ft water level

* 1316 suspend dredging, change out shuttle barge

1323 resume dredging

1315 Vern Musser (Envirocon) switch out w/ Norm Clingan (Envirocon)

1400 weather level 600.4 ft

1418 water level = 600.4 ft

1419 Norm Clingan (Envirocon) + Jim Hacker (Envirocon)

Cannelton Industries
Sault Ste Marie, MI / USEPA

Monday
7/23/07

on board dredge

1430 move forward to Station 125, pivot to south.
1445 Kelly Hudson on dredge barge. Relieve Elmer.
1530 Elmer off barge for day

Cannelton Industries
Sault Ste. Marie, MI USEPA

Tuesday
7/24/07

weather: cloudy humid 70's
0700 Elmer Van Wagner (Weston) relieve Diane Russell (Weston). Currently dredging suspended due to tag line repair. Dredging activities are halted at Station 160
Diane Russell leave barge
0755 MCM opening turbidity curtain
0850 MCM close turbidity curtain... scow changed out
0929 tag line repaired, resume dredging. Wayne of MCM was confirming depths/elevations w/ Trimble GPS unit during repair activities.
0930 Enviro con switch out staff. Ken McDowell replaced by Brett Bishop
0953 water level is 600.4 ft
1048 pivot to north
1125 suspend dredging, (GPS N 634075.62, E 26904114.70) problem w/ crane mechanical system.
1141 MCM shift change
1154 Elmer to shore to purchase gasoline for boat
* 1155 shuttle change out
1210 resume dredging
1230 suspend dredging, pivot south side
1232 resume dredging
1308 Skip Simpson on board dredge
1310 move forward, Station 171
1318 MCM readjusting silt curtain
1325 silt curtain readjusted
* 1331 shuttle barge change out
1331 dredging suspended
1336 resume dredging
1336 water level is 600.6 ft

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Tuesday
7/24/07

Cannelton Industries
Sault Ste. Marie, MI / USEPA
1345 Envirocon shift change: Brett Bishop pick up Norm Clingan + Jim Hauter (Envirocon), Brett leave site
water level 600.5 ft
1353 Norm + Jim on dredge barge
1400 Elmer to collect turbidity readings.
mark 273 N46° 29.783', W84° 23.337' turbidity = 1.11 NTU
mark 274 N46° 29.747, W84° 23.381' turbidity = 14.6 NTU
mark 275 N46° 29.819, W84° 23.327 turbidity = 1.68 NTU
mark 276 N46° 29.831, W84° 23.345 turbidity = 0.45 NTU
mark 277 N46° 29.785, W84° 23.388 turbidity = 0.53 NTU
mark 278 N46° 29.797, W84° 23.409 turbidity = 1.05 NTU
mark 279 N46° 29.749, W84° 23.431 turbidity = 12.6 NTU
mark 280 N46° 29.763, W84° 23.440 turbidity = 5.76 NTU
mark 282 N46° 29.559, W84° 23.317 turbidity = 54.5 NTU
mark 283 N46° 29.654, W84° 23.252 turbidity = 21.3 NTU
1502 Elmer complete turbidity readings, Kelly Hudson to relieve Elmer on shift change.
1500 shuttle change out
1500-1535 Elmer, Kelly + Andy Kiel to shore for meeting between the three of us. Regarding issues on ~~overdrafting~~ overdredging lane 4 (MCM)
MCM has to overdredge lower than target elevation due to dredge barge & shuttle barge draft. Weston does not have to authorize overdredge activities for this dredge lane (4). We discussed Envirocon's authority & responsibilities, who to contact with questions that come up by MCM or Envirocon (directed to Weston), health & safety issues, chain of command, any other issues. Elmer will request Weston Health + Safety Plans for both dredge barges.
1605 Elmer back to MCM yard & Weston trailer —
End day

Cannelton Industries, Wednesday
Sault Ste Marie, MI / USEPA 7/25/07
0645 Elmer VanWagner on site to relieve Diane Russell.
0700 Diane leave site
MCM dredge currently working Lane 4, Station 190.
0712 MCM suspend dredging, preparing to move to north, Skip Simpson on barge
0744 Skip off MCM barge to White Lake Dredge
0757 Elmer inspect turbidity curtain... two tears noted. One tear located between orange and yellow floats and second located within orange floats. Elmer to inform Envirocon of the tears + recommend repair.
Both tears are along north side of curtain.
0812 resume dredging, dredge move complete. Lane 1A, Station 2
0840 water level is 600.5 ft.
0900 water level is 600.4 ft
* 0900 change out loaded shuttle barge
MCM also changing out bucket from bucket with teeth to clam bucket
0915 MCM complete bucket change over.
0930 shuttle return empty, resume dredging.
0936 water level = 600.2 ft
0945 Elmer retrieve Health + Safety Plan from Annette Dickinson @ dock (2 copies).
1030 water level is 600.5 ft
* 1040 suspend dredging, change out shuttle barge.
1045 water level is 600.6 ft
Brett Bishop (Envirocon) on barge
1106 Brett + Elmer to inspect turbidity curtain.
1115 shuttle barge return, 1120 resume dredging
1120 Brett + Elmer return to dredge barge (MCM)
1125 water level is 600.7 ft

Wednesday
7/25/07

Cannelton Industries
Sault Ste. Marie, MI / USEPA

1126 Brett (Envirocon) leave MCM dredge barge
after note: Jim Hauter (Envirocon) on dredge since
Weston shift began.
1130 shift change for MCM
1147 MCM resume dredging, Jim Hauter (Envirocon)
to shore for bathroom break
1200 Jim Hauter back on barge
1230 dredging suspended
*1249 shuttle change out
shuttle delay due to off loading backup
1322 water level = 600.5 ft
1325 shuttle change out complete.
1327 resume dredging
N634314.81E 2690451.57, Station 14
1405 suspend dredging shuttle change out.
*1416 water level 600.6 ft
shuttle delay due to shuffling White Lake Barges &
MCM barges @ dredge 56
1500 water level = 600.4 ft
1505 shuttle return empty, resume dredging
1520 Elmer relieved by Kelly Hudson (Weston)
Elmer leave barge & mobilize to office @ MCM yard.

EP

Cannelton Industries
Sault Ste. Marie MI / USEPA

Thursday
7/26/07

0645 Elmer Van Wagner relieve Diane Russell of shift.
Currently dredging Lane 1A, Station 30
Envirocon representative Jim Hauter is on board dredge
0720 water level = 600.3 ft
0725 suspend dredging
Shuttle barge changeout
0729 water level is 600.4 ft
0740 shuttle barge return to dredge
0746 resume dredging. Andy Kiel called Elmer + indicated that he + Kelly Hudson inspected turbidity curtain + found the two tears I had identified to Brett Bishop + Jim Hauter of Envirocon. I informed Jim of the condition of the turbidity curtain, and showed Brett the tears and areas of the curtain where the curtain seems to be "billowing" in the water ~~curtain~~ current. Andy indicated he informed Norm Clingan yesterday of the turbidity curtain condition and told Skip Simpson of Envirocon of the condition also. I will re-inspect the curtain today
Aftermath: empty shuttle barge came back with approximately 6 inches water in pigpen
0828 move forward to Station 49 Lane 1A. Bob Everitt (MCM) indicated that Sunday 7/29/07 will be a maintenance day... MCM will be fixing turbidity curtain during day shift. He said that night shift, 11-1200Am ~~Mon~~ Sunday evening / Monday morning will be back to dredging
0832 water level 600.4 ft
*0915 shuttle barge changeout, suspend dredging
0939 change out completed, resume dredging.

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Thursday
7/26/07

Cannelton Industries
Sault Ste. Marie, MI / USEPA

0915-0945 Elmer inspect turbidity curtain, same tears in curtain as identified on 7/25/07. Also observed offloading @ Dredge 56. Offloading White Lake barge, very sloppy material offloaded with ~~slash~~ splash material ending up ~~over~~ in water of bay.

1012 water level is 600.3 ft

1036 dredging suspended, waiting for shuttle

*change out, Bob Everitt (MCM) measure volume of clam bucket currently being used on MCM dredge.

1103 shuttle change complete; delay caused by slow offloading

1104 resume dredging

1104 water level is 600.7 ft

1125 Envirocon staff (Jim Hauter) to shore for restroom.

1132 MCM shift change, suspend dredging, Jim Hauter (Envirocon) back on board dredge.

1145 resume dredging

1225 suspend dredging wait for shuttle change out.

*1313 shuttle change completed, delay caused by slow off-loading at Dredge 56

1306 water level = 600.3 ft

1313 readjusting silt curtain near shuttle barge

1316 resume dredging

1319 Skip Simpson (Envirocon) on dredge

1340 Elmer + Andy to record turbidity readings —
mark N46° 29.758, W84° 23.376' turbidity = 3.77 NTU
291 mark N46° 29.782, W84° 23.326 turbidity = 2.39 NTU
292 mark N46° 29.817', W84° 23.366' turbidity = 1.27 NTU
293 mark N46° 29.844', W84° 23.381 turbidity = 1.01 NTU
294 mark 295 N46° 29.721', W84° 23.420, turbidity = 1.42 NTU
mark 296 N46° 29.735, W84° 23.440, turbidity = 1.55 NTU

*1348 change out shuttle barge, suspend dredging

Cannelton Industries

Sault Ste Marie, MI USEPA

Thursday
7/26/07

Shuttle barges are backed up for fifth time today.
1435 Elmer pick up Kelly Hudson from dock.
1435-1500 Elmer, Kelly + Andy Riel have conference to discuss the days' activities & issues.
1450 shuttle barge return empty
1515 Elmer to shore + end day

Cannelton Industries
Sault Ste Marie, MI / USEPA

FRIDAY
7/27/07

0645 Elmer VanWagner relieve Diane Russell
Station 48 Line 1a is current dredge location;
waiting for shuttle to return. Currently
dredging has been suspended
Brett Bishop (Enviracon) on barge
0715 water level = 600.7 ft
0716 shuttle barge return
0720 resume dredging
Afternote: dredge moved forward at 0637, to
Station 63 Lane 1a
*0828 shuttle change out, suspend dredging
0840 resume dredging, new shuttle
0840 water level = 600.5 ft
0907 water level = 600.4 ft
0918 Pivot to east
*0954 suspend dredging, shuttle change out
0955 water level 600.5 ft
1000 shuttle change complete, rain has started.
1005 resume dredging
1043 water level 600.8 ft
1100 water level 600.9 ft
1112 move forward, Station 74 Lane 1a
1123 suspend dredging, shuttle change out
*1129 shuttle change out complete
1130 shift change for MCM
*1223 shuttle change out, waiting for empty shuttle
1319 water level = 600.4 ft
1345 shuttle return, resume dredging
1413 Elmer pointed out two leaks on shuttle barge
(leaks from secondary containment) to Brett Bishop
(Enviracon).
~~1415 waiting on empty shuttle barge. Slow work~~
~~at dredge 56~~

Cannelton Industries
Sault Ste. Marie, MI / USEPA

7/27/07
FRIDAY

1410-1424 suspend dredging
1424 resume dredging
1430 suspend dredging
After note: skip Simpson on dredge barge from
1430—1640 waiting for dredge 56 to unload
shuttle barge so MCM can change out full
shuttle.
1500 mark 297 N 46° 29.759, W84° 23.423'
turbidity = 2.65 NTU mark 298 46° 29.784, W84°
23.458' turbidity = 1.39 NTU, mark 299 46° 29.803,
W84° 23.375' turbidity = 1.22 NTU, mark 300,
N46° 29.824, W84° 23.394 turbidity = 0.61 NTU
mark 301 N46° 29.783', W84° 23.313' turbidity = 1.19
mark 302 N46° 29.562, W84° 23.288 turbidity = 29.0 NTU
NTU. Complete turbidity readings
1530 shuttle moved to dredge 56
1615 tag line on dredge 56 needs repair.
1645 tagline repaired, resume unloading
1717 shuttle back @ barge
1723 resume dredging
1755 suspend dredging, waiting on shuttle
changeout.
1805 barge changed

162 Cannelton Industries 7/28/07

Sault Ste. Marie, MI / USEPA SATURDAY

0700 Elmer VanWagner (Weston) on site, relieve Kelly Hudson. Elmer + Kelly grab water levels, download water level instrument from still well. Currently dredging suspended, GPS = N634397.77, E26904131.68.

0705 open turbidity curtain, change out ~~scow~~ scow.

0755 turbidity curtain back in place

0836 shuttle change out complete, resume dredging

0931 - pivot to east

water level 600.8 ft

1000 - Elmer inspect turbidity curtain. Same area compromised as noted on 7/25/07. Size of tear is approximately 25 feet wide.

*1000 suspend dredging, shuttle barge changeout

1020 changeout complete, resume dredging.

1037 pivot barge to east

1041 Readjust silt curtain

(1040 White Lake move shuttle barge to scow)

1130 dredging (MCM) suspended, refueling crane, shift change

1130 (White Lake pushed backward to dredge area near silt curtain

1145 water level is 600.8 ft

1211 (White Lake suspend dredging lunch?)

1130 dredging suspended, shuttle full

*1238 shuttle barge changed out (delay due to offloading at dredge 56)

1240 Resume dredging (MCM)

1249 water level = 600.9 ft

1315 dredging suspended (MCM) waiting for shuttle change out

1336 water level = 600.7 ft

SATURDAY
7/28/07

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Cannelton Industries
Sault Ste. Marie, MI / USEPA

1415 water level = 600.5 ft
1422 shuttle change out completed
1423 resume dredging
Alternate: Envirocon staff Brett Bishop + Ken McDowell on dredge
1500 Elmer pick up Kelly Hudson + End day

Sunday
7/29/07

Cannelton Industries
Sault Ste Marie, MI/USEPA

1130 Elmer Van Wagner on site at observation deck. Elmer observe MCM/ENVIROCON move dredge back off Lane 1a and ride tug to dredge 56. Wayne (MCM) and family at observation deck at same time. ——— EW

1230 Elmer leave observation deck ——— EW

1800 Elmer return to site to inspect turbidity curtain. Area of curtain tear repaired/patched. Also notice east end of turbidity curtain pulled south (closer to dredge 56). ——— EW

1845 Elmer to shore, leave site for day ——— EW

EW

Monday
7/30/07

Cannelton Industries
Sault Ste Marie, MI / USEPA
0700 Elmer VanWagner on site, relieve Diane Russell
*0722 MCM change out shuttle.
0722 resume dredging. Currently dredging Lane 1a, Station 126
0728 water level = 600.5 ft
Environ on site since 07:00 (Jim Hauter)
0845 Dredge 56 down. Tagline broken.
0855 Elmer transport 3 of White Lake dredge crew to shore. Andy Kiel to shore also
Currently White Lake has full shuttle barge.
*0900 MCM switch out loaded barge. Suspend dredging
0907 Resume dredging (MCM)
0935 MCM opening turbidity curtain
MCM tugboat got tangled up in turbidity curtain
MCM staff trying to cut curtain off rudder of tugboat
1015 Dredge 56 up & ~~down~~ off loading shuttle barges
1032 water level = 600.6 ft
1035 MCM appears to have closed turbidity curtain
*1045 suspend dredging on MCM barge, Full shuttle. Andy Kiel + 3 White Lake staff back to White Lake dredge barge.
1114 water level is 600.9 ft
MCM waiting for shuttle change out
1130 shift change
11:41 water level = 601.1 ft
1206 Elmer, Andy + Chris Lanitzga on White Lake dredge barge.
1237 Shuttle change out
1240 resume dredging (MCM)
1327 suspend ~~dredge~~ dredge

water deck.
dredge
edge 56.
tion deck
turbidity
red/patched.
ain pulled
day

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Cannelton Industries
Sault Ste. Marie, MI / USEPA

Monday
7/30/07

1330 pivot dredge.
*1419 change out shuttle
1423 readjust silt curtain, resume dredging.
1430 pickup Kelly Hudson from dock.
Currently dredging Station 131, Lane 1a.
1445 Elmer relieved by Kelly Hudson

EH

Cannelton Industries
Sault Ste Marie MI/USEPA

Tursday
7/31/07

0700 Elmer Van Wagner relieve Diane Russell (Weston)
Envirocon (Jim Hauter) on dredge
0700-0745 Elmer to White Lake Barge, talk to Andy Kiel re: day's activities, site visit by project management, housekeeping, etc
*0800 shuttle change out, dredging suspended
0812 resume dredging
0815 - MCM turn off generator ... change oil.
Currently dredging Station 154 Lane 1a
0822 water level = 600.6 ft
0830 dredging suspended
0846 resume dredging
*0943-953 shuttle change out
0953 resume dredging
1010 Elmer to dock to pick up Chris Lantinga
1034 MCM crane boom rigged down, suspend dredging ... broken tag line spool.
Spring on tag line spool is broken
1132 Elmer transport Chris Lantinga & crew to shore.
1135 shift change for MCM
1215 open turbidity curtain, ~~for scow change out~~
turbidity curtain opened for Drummond Island ferry to drop off spindle for tagline on MCM dredge.
1300 turbidity curtain closed
14:49 Resume dredging, tag line spool fixed,
14:52 water level = 600.4 ft
*1454 suspend dredging, shuttle change out.
1501 Resume dredging
1515 Kelly Hudson relief for Elmer.

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Wednesday

Cannelton Industries
Sault Ste Marie, MI / USEPA

8/1/07

0445 Elmer Van Wagner shift change for Andy Kriel (Weston). Dodge Phelps representative on board White Lake dredge barge filming activities
MCM barge suspended dredging (shuttle barge is full)
*1513 White Lake shuttle change out
1535 water level is 600.5 ft
*1541 MCM shuttle change out, resume dredging
1618 water level is 600.5 ft
1625 water level is 600.7 ft
1628 White Lake resume dredging
1633 MCM suspend dredging, pivoting dredge moving to Lane 2a
1703 Stop dredge (White Lake) full barge.
*1715 MCM shuttle change out
*1720 White Lake move shuttle to dredge 56
White Lake currently @ Station 200 Lane H (west half)
1727 MCM readjusting silt curtain
1733 White Lake shutting down for day
1750 Elmer to collect turbidity measurements.
mark 324 N 46° 29.568', W 84° 23.335 turbidity = 30.3 NTU
mark 325 46° 29.579', W 84° 23.286 turbidity = 23.1 NTU
mark 326 46° 29.623, W 84° 23.252 turbidity = 11.1 NTU
mark 327 46° 29.682, W 84° 23.262 turbidity = 16.0 NTU
mark 328 46° 29.764 W 84° 23.441 turbidity = 1.55 NTU
mark 329 46° 29.777 W 84° 23.461 turbidity = 0.49 NTU
mark 330 46° 29.817 W 84° 23.367 turbidity = 0.41 NTU
mark 331 46° 29.863 W 84° 23.378 turbidity = 0.43 NTU
1815 White Lake to dredge barge w/empty shuttle.
1825 White Lake to shore
1837 MCM resume dredging in Lane 2a
1840 water level 600.2 ft
Norm Clingan (Enviracon) on barge

Cannelton,
Sault Ste.
Lane 2a
*1908 shut
1913 resu
1917 wate
1924 Pivo
1947 sus
1951 wa
2000 mo
*2024 sh
2025 Wat
*2054 sh
stop dre
waiting f
2125 shuttle
2126 Water
2125 resur
2140 Pivot
2147 stop
Lane 2a
2150 resum
2209 stop
shuttle fi
Shuttle be
*2255 shuttl
2256 resum
Enviroco
Ken McDo
1110 Elmer
for day

Lane 2a station -6 start dredging
*1908 shuttle change out, stop dredging
1913 resume dredging
1917 water level 600.5 ft
1924 Pivot west, Lane 2a
1947 suspend dredging, full shuttle
1951 water level 600.5 ft
2000 move shuttle to dredge 56
*2024 shuttle change complete, resume dredging
2025 water level 600.4 ft
*2054 shuttle change out
stop dredging
waiting for empty shuttle
2125 shuttle change out complete
2126 water level 600.4 ft
2125 resume dredging
2140 Pivot to west
2147 stop dredging, move forward to Station 9, Lane 2a
2150 resume dredging
2209 stop dredge
shuttle full, waiting for change out
Shuttle being fixed (pig pen wall),
*2255 shuttle change out complete
2256 resume dredging
Enviocon shift change Norm Clingan leave, Brett 4th
Ken McDowell on board
1110 Elmer pick up Diane @ dock, and Elmer leave for day

Thursday
8/2/07

Cannelton Industries
Sault Ste. Marie, MI / USEPA

1500 Elmer Van Wagner (Weston) relieve Andy Kiel (Weston), Elmer to watch White Lake & MCM dredge activities
1500 White Lake resume dredging after shuttle changeout
1500 MCM suspend dredging due to wait for shuttle changeout.
White Lake is currently working Lane H, between Stations 200 and 250
1526 White Lake shuttle full, move to Dredge 56.
1553 MCM shuttle changeout completed / resume dredging
1631 White Lake shuttle changeout completed, White Lake resume dredging
1633 water level = 680.6 ft
1645 MCM pivot to EAST
1645 MCM full shuttle, suspend dredging
1700 White Lake shuttle changeout, dredge suspended.
1702 water level 600.4 ft
1730 MCM shuttle changeout complete, resume dredge.
1730 MCM working on Station 81, Lane 2a.
1800 MCM move forward to Station 90, Lane 2a.
1801 water level = 600.7 ft
1814 MCM suspend dredging, full shuttle, wait for empty shuttle to changeout.
1821 MCM refuel crane
1833 Elmer to measure turbidity
Inside Turbidity Curtain:
mark 332 N46° 29.577, W84° 23.336, turbidity = 20.4 NTU (near MCM barge) / mark 333 N46° 29.597, W84° 23.252' turbidity = 11.8 (at dredge lane south corner) / mark 334 N 46° 29.732', W84 23.347 turbidity 40.1 NTU (south of water barge) / mark 335 N46° 29. / mark 335 N46° 29.760', W84° 23.326' turbidity = 0.94 (EAST of Dredge 56). Too rough to go outside turbidity

Cannelton Industries
Sault Ste. Marie, MI / USEPA

Thursday 171
8/2/07

curtain. Waves are +1 foot inside turbidity curtain
1855 MCM complete shuttle changeout, resume dredge.
1905 waterlevel = 601 ft
1917 pivot west, resume dredge
1941 suspend drilling, waiting to changeout shuttle
2005 waterlevel = 600.5 ft
2010 resume dredging shuttle changeout complete
2045 suspend dredging, wait for shuttle changeout
2124 resume dredging, shuttle change complete
2152 move forward to Station 105, Lane 2a.
2215 stop dredging, wait for shuttle changeout.
2235 resume dredging shuttle changeout complete.
2253 Shift change Envirocon Norm Clingan to shore, Ken McDowell on board
2310 Elmer to shore, Weston staff Shift Change Diane Russell relieve Elmer.

EP

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FRIDAY
8/3/07

Cannelton Industries
Sault Ste. Marie, MI / USEPA

1445 Elmer to White Lake dredge to relieve Andy Kiel. (Weston)

1456 MCM dredge suspend dredging, full shuttle, ~~1500~~ 1458 White Lake loading empty barge, and transport full barge to Dredge 56

Weather today - clear 71°F, very windy 1-2 ft waves outside turbidity curtain.

Water level is 600.8 ft

1530 White Lake pivot north + move back.

Readjusting silt curtain

Enviroc'ns staff occupying MCM + White Lake dredges.

1541 White Lake suspend dredging, wait for empty shuttle

1602 MCM resume dredge, shuttle changeout complete. Chris Lankinga + Annette Dickinson (Weston) on White Lake dredge

1630 Chris + Annette leave White Lake dredge, mob to MCM dredge

1639 Chris + Annette @ dock, leave site

1700 White Lake resume dredging, shuttle changeout complete. take full shuttle to dredge 56

after note: 1645 MCM stop ~~dredging moving~~ pivot dredge

1645 MCM stop dredging readjusting silt curtain very windy

1741 White Lake stop dredging, pivot, move forward

1742 MCM resume dredging

1755 White Lake stop dredging full shuttle, move to "56"

1755 MCM stop dredging full shuttle.

1755 water level is 601.1 ft

1833 White Lake off site for day

1834 MCM complete shuttle change

1855 water level is 600.9 ft, still very windy

Cannelton Industries — Friday

Sault Ste. Marie, MI / USEPA — 8/3/07

afternote 1645 MCM dredging Station 173 Lane 2a.
1903 Bob Everitt leave dredge for day, Wayne (MCM) shift change
1920 MCM stop dredging, full shuttle
2045 MCM resume dredging / shuttle change complete
2129 MCM stop dredging full shuttle.
2205 MCM shuttle changeout completed.
2206 water level is 600.5 ft
2208 Station 187 Lane 2a
2253 Elmer leave barge, relief by Brian Russell.

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Cannelton Industries
Sault Ste Marie, MI / USEPA

Saturday
8-4-07

0615 Elmer VanWagner (Weston) on board White Lake barge. Water level = 600.5 ft.
Envirocon staff on board White Lake & MCM barges. Weather: Clear, calm, 51°F
0632 White Lake begin dredging. Skip Simpson on board White Lake barge.
0645 MCM suspend dredge for shuttle changeout
0656 MCM complete shuttle change out and resume dredging
0657 Skip Simpson leave White Lake barge & site.
0700 MCM dredging @ Station 193, Lane 2a
0708 suspend dredge (White Lake) wait for shuttle changeout.
0716 White Lake resume dredge
White Lake pivot ~~East~~ West
0733 Elmer to inspect turbidity curtain
0750 water level is 600.6 ft
Turbidity curtain appears to be in tact.
East end of curtain is very close to scow.
0715 Envirocon off site (Ken McDowell) MCM oversight
0805 MCM stop dredging, full shuttle, changeout
0815 MCM resume dredging, changeout completed
0832 water level is 600.7 ft
Wayne (MCM) is surveying next Lane (Lane 3a)
0835 Envirocon has staff on dredge (Jim Hauter).
(0715 to 0835 Envirocon had no staff conducting oversight on MCM barge).
0845 MCM moving silt curtain, preparing for Lane change.
0906 water level = 600.7 ft
0910 MCM stop dredge. Shuttle full, Lane 2a complete.
0914 MCM Lane 2a, GPS coordinates N 634487.61 E 2690402 6.77
MCM readjusting/moving working silt curtain to Lane 3a.

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0927 whit
1005 Whit
1106 MCM
1120 white
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repair/r
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Cannelton Industries — SATURDAY
Sault Ste. Marie, MI / USEPA — 8-4-07

0927 White Lake resume dredging, shuttle change complete.
1005 White Lake stop dredge, change out shuttle.
1106 MCM resume dredging Lane 3a
1120 White Lake resume dredge, changeout complete
1130-1150 shift change MCM
1200 - Water level = 600.6ft
1150 - ~~bucket~~ pin on clam bucket arm sheared off. repair/replace bucket
1227 MCM replaced broken clam bucket w/ red bucket w/ teeth, resume dredging
1150 White Lake stop dredging, shuttle full, transport shuttle to Dredge 56
1315 MCM opening turbidity curtain
1309 MCM stop dredging
1305 White Lake rearranging silt curtain
1350 Scow changeout
1416 ~~close~~ MCM close turbidity curtain
1400-1500 White Lake move dredge to area near dock. MCM has indicated they are changing buckets on both MCM cranes. White Lake shuttles (2) both remain ~~onto~~ loaded at Dredge 56. White Lake move working silt curtain to near shore so Wayne (MCM) can survey dredged areas.
MCM replace red bucket w/ replacement, replacement bucket did not work properly. MCM replaced replacement bucket w/ red bucket. MCM change out ~~1545 resume dredge~~ full ~~to~~ shuttle w/ new.
1545 resume dredging w/ new shuttle.
1650 MCM location is Station -25 Lane 3a.
1700 ~~E~~/mer to collect turbidity measurements.
1700 water level = 600.6ft

See Next Page

Cannelton Industries
Sault Ste. Marie, MI / USEPA

Saturday
8/4/07

~~mark~~ Inside Curtain: mark 336 46° 29.579, W84° 23.350 turbidity = 16.7 NTU east of MCM dredge; mark 337 46° 29.585, W84° 23.261' turbidity = 17.4 NTU SE corner of dredge lane; mark 338 N46° 29.733, W84° 23.290, turbidity = 5.40 NTU NE corner of dredge lane; mark 339, N46° 29.731, W84° 23.381 turbidity = 16.1 NTU just NW of water barge; mark 340 N46° 29.767, W84° 23.374' north of debris scow turbidity = 2.44 NTU; mark 341 N46° 29.791, W84° 23.322, turbidity = 1.10 NTU NE of debris scow; Outside Curtain: Mark 342 N46° 29.799', W84° 23.363, turbidity = 0.63 NTU (100 ft); mark 343 N46° 29.815', W84° 23.379' turbidity = 0.70 NTU (200 ft); mark 344 N46° 29.762', W84° 23.415' turbidity = 0.45 NTU (100 ft); mark 345 N46° 29.772, W84° 23.432 turbidity = 0.77 NTU

1738: MCM continue dredging
1745 water level is 600.6 ft
1745 MCM stop dredging full shuttle
1747 Skip Simpson (EnviroCon) on barge
~~1754 resume dredging~~
1754 MCM using crane to lift broken clamshell bucket
~~1804 resume dredging~~
1818 Skip Simpson off barge, resume dredging
1818 resume dredging.
1835 stop dredging using crane to lift clamshell bucket for repair
1840 resume dredging
1845 water level 600.8 ft
1910 Elmer relieved by Diane Russell (Westin)
End day

Cannelton Industries — Sunday

Sault Ste Marie, MI / USEPA — 8-5-07

0745 Elmer relieve Diane Russell. — White Lake not working today

0800 MCM finish shuttle changeout. Jim Hauter (EnviroCon) at dredge. MCM start dredging

0811 water level = 600.2 ft

0828 MCM stop dredging due to low water 600.1 ft

0938 resume dredging, water level is 600.5 ft

0952 stop dredging shuttle changeout.

0957 resume dredging

Station 25

1052 move dredge forward

Stopped dredging, waiting for barge changeout. Currently moved to Station 35 Lane 3a

1114 resume dredging

1134 stop dredge - shift change MCM

1144 resume dredging

1153 stop dredge, grease crane

waiting for shuttle change out

1246 resume dredging

1308 stop dredging full shuttle. Water level is 600.4 ft

1410 ~~sto~~ resume dredging changeout complete

1440 stop dredging, full shuttle

1455 water level 600.3 ft

afternoon: EnviroCon shift change Norm Clingan on board

Dredging Station 50 Lane 3a

1537 shuttle change complete, resume dredge

1618 stop dredge

1718 Elmer to measure turbidity

Inside curtain: mark 346 N46° 29.579', W84° 23.333

100' east dredge barge turbidity = 29.7 NTU; mark 347

N46 29.581, W84° 23.311 turbidity = 27.4 NTU;

Sunday
8-5-07

Cannelton Industries
Sault Ste. Marie, MI / USEPA
mark 348 N46° 29.769, W84° 23.323 turbidity = 1.77 NTU
east of dredge 56; mark 349 N46° 29.768, W84° 23.363'
turbidity 1.83 NTU a few feet north of debris screw.
OUTSIDE CURTAIN: mark 350 N46° 29.819', W84° 23.291
turbidity = 1.25 NTU (100 feet east curtain); mark 351
N46° 29.833, W84° 23.277 turbidity = 1.44 NTU (200' east
of curtain); mark 352 46° 29.768, W84° 23.423 turbidity =
1.02 NTU (100' north curtain); mark N46° 29.806, W84°
23.440' turbidity = 0.25 NTU (200' north curtain)
1745 MCM stop dredging full shuttle
1805 resume dredging at Station 58 Lane 3a.
water level = 600.4 ft
1833 stop dredge full shuttle
1909 Elmer relieved by Diane Russell (Weston)

Cannelton Industries — Monday

Sault Ste. Marie, MI / USEPA — 8-6-07

0700 Elmer Van Wagner relieve Diane Russell (Weston) MCM dredging Station 83 Lane 3a, White Lake

WL) dredge arrive @06:15, 0630 WL move dredge to work area, adjust working silt curtain. 0645 WL start dredging

0722 water level is 600.8 ft

0730 MCM move forward to Station 93, Lane 3a.

0735 WL stop dredge switch out shuttle

0739 WL resume dredging

0746 MCM stop dredging, shuttle change out

0752 water level is 600.5 ft

0758 MCM resume dredging

0833 WL stop dredge, switch shuttle

0833 Dredge 56 crane broken.

0857 Dredge 56 fixed, MCM moving shuttles around at Dredge 56 due to preparation of scow change out. Rudy called (MCM) and is in lock w/ new scow.

0859 MCM stop dredging, greasing bucket, shuttle full.

0922 MCM open turbidity curtain.

Afternote: Envirocon staff Jim Hauter on dredge at shift change

1042 Close turbidity curtain; scow change out completed

1130 WL start dredging, shift change MCM.

1205 WL stop dredging, full shuttle

1256 MCM resume dredging

1343 water level is 600.6 ft

1345 MCM stop dredging, full shuttle

1349 WL resume dredging

1400 Elmer measure turbidity

INSIDE CURTAIN: mark 354 N46° 29.580', W84° 23.344 turbidity = 18.1 NTU (100' East of MCM dredge); mark 355 N46° 29.565, W84° 23.306' (200' SE of MCM dredge) turbidity = 19.1 NTU;

180

Monday
8-6-07

Cannelton Industries
Sault Ste Marie, MI / USEPA
mark 356 N46° 29.777', W84° 23.325' turbidity = 2.08 NTU (East of Dredge 56); OUTSIDE turbidity Curtain: mark 357 N46° 29.799', W84° 23.397 turbidity = 1.17 NTU (100' northwest of scow); mark 358 N46° 29.811, W84° 23.433 turbidity = 1.08 NTU.
1415 WL stop dredge, full shuttle
1500 MCM resume dredging
1545 Elmer relieved by Andy Kiel + Gary Swartz (Weston)

Cannelton Industries
Sault Ste Marie, MI / USEPA

Tuesday
8-7-07

0650 Elmer relieve Diane Russell (Weston) MCM at station 135 Lane 3a. MCM stopped dredging due to power/computer problem/malfunction.
Andy Kiel (Weston) is on White Lake dredge barge
Water level is 600.5 ft
Envirocon (Jim Hauter) on barge
0726 Resume dredging
0750 move forward
Station 145 Lane 3a
water level is 600.9 ft
0824 stop dredging, ~~full shuttle~~ scow MCM changing clam bucket on Link Belt
0844 resume dredging
0853 stop dredging, full shuttle
0905 shuttle change completed, resume dredging
water level is 600.4 ft
0925 water level is 600.0 ft
0939 water level is 599.8 ft
0930 MCM open turbidity curtain for scow changeout
0950 low water, stop dredging (599.80 ft)
1031 MCM resume dredging, water level is 600.1 ft
1050 White Lake resume dredging
1057 MCM closed turbidity curtain
1058 white Lake stop dredging, MCM stop dredging full shuttles for both crews
white Lake moving shuttle #3 to Dredge 56
1106 water level is 600.5 ft
1124 shift change (MCM)
1250 MCM resume dredging
1328 MCM pivot west
1340 MCM stop dredging, full shuttle
1420 Elmer collect turbidity measurements

182 Cannelton Industries
Sault Ste Marie, MI / USEPA

Tuesday
8/7/07

INSIDE CURTAIN:
mark 359 N46° 29.584, W84° 23.339 turbidity = 18.4 NTU (100' SE from MCM barge); mark 360 N46° 29.568 W84° 23.316 turbidity = 21.3 NTU (200' SE of MCM barge); mark 361 N46° 29.786, W84° 23.334 turbidity = 2.09;
OUTSIDE TURBIDITY CURTAIN: (after note mark 361 was collected EAST of Dredge 56); mark 362 N46° 29.820, W84° 23.368 turbidity = 1.92 NTU (100' north curtain); mark 363 N46 29.852, W84 23.401 turbidity = 1.23 NTU (200' outside curtain); mark 364 N46° 29.756, W84° 23.432 turbidity = 1.51 NTU (100' outside curtain); mark 365 N46° 29.801, W84° 23.450' turbidity = 1.15 NTU (200' outside curtain).
1500 Elmer pick up Gary Swartz (Weston) at dock.
1545 Elmer leave site to PAD office

Cannelton Industries
Sault St. Marie, MI/USEPA

Wednesday 83
8/8/07

0700 Elmer VanWagne relieves Diane Russel (Weston)
MCM currently dredging Lane 4a, changing out shuttle. Envirolon on barge (Skip Simpson, Jim Hunter)
0717 Skip Simpson leave MCM barge
0720 resume dredging
0744 stop, move to Station 60 Lane 4a
0746 resume dredging
802 water level is 600.7 ft
0834 Stop dredging, full shuttle
0836 water level is 600.7 ft
0909 resume dredging
0910 water level is 600.6 ft
1026 MCM stop dredging full shuttle
Andy Kiel out to turbidity curtain to check integrity in shallow water (5' long curtain)
1058 MCM resume dredging
1137 Stop dredging, shift change
1155 Chris Lantinga/Rick Beech (Weston) on board
1158 resume dredging (MCM)
1229 MCM stop dredge, full shuttle
Elmer, Chris Rick tour site, inspect barges, take photos.
1318 Resume dredging
1400 - Elmer takes Christ Rick to shore.
1410 Dredge continued (MCM) move ahead Station 77 Lane 4a
1458 Stop dredge change ~~scow~~ shuttle
1500 Gary Swartz (Weston) relieve Elmer. Tug for MCM ran out of fuel in middle of bay.
1500 MCM opening turbidity curtain
Elmer leave site @ 1530

8-9-07

Cannelton Industries
SAULT STE MARIE, MI / USEPA

Thursday

0730 - Elmer relieve Diane Russel (Weston)
MCM @ Station 97 Lane 4a. Weather partly cloudy, 60's. Jim Hauter of Envirocon on dredge.
0740 MCM stop dredging full shuttle.
0828 water level is 600.3 ft
0829 resume dredging
0900 water level 600.2 ft
0909 move forward to Station 107 lane 4a.
0938 water level is 600.4 ft
0940 stop dredging, full shuttle
1021 MCM resume dredging
1045 MCM repair pig peel on shuttle
1051 resume dredging
1135 shift change stop dredging
1145 stop dredging shuttle change out.
1224 water level is 600.0 ft
1225 resume dredging
1250 stop dredging shuttle full
1340 resume dredging
1416 stop dredging, full shuttle.
1430 water level is 600.4 ft
1437 shift change Envirocon (Jim Hauter leave, Norm Clingan on)
1500 Elmer relieved by Gary Swartz (Weston)

EOT

Cannelton Industries 8-10-07
Sault Ste. Marie, MI /USEPA FRIDAY
0710 Elmer relieve Diane Russel (Weston), Jim Hauter (Enviracon) on MCM dredge. Currently @ Station 145 Lane 4a. MCM currently changing out shuttle barge
0756 resume dredging
0758 water level is 600.4 ft
0840 Elmer to check turbidity curtain INSIDE and OUTSIDE. Need to pull curtain tight to shoreline @ east end. (gap of approx. 15 ft to piling)
0900 – 919 Elmer, Andy Kiel (Weston) Derek (Enviracon) read just white Lake's silt curtain. MCM move forward to Station 151.
0910 MCM stop dredging, shuttle change
0940 MCM resume dredging
1122 stop dredging, full shuttle.
1130 MCM shift change
1228 resume dredging
1311 stop dredging, full shuttle, grease dredge bucket
1355 resume dredging (MCM)
1355-1445 Elmer + Andy Kiel adjust white Lake ~~to~~ working curtain + take pictures of white Lake + MCM barges working
1445 Elmer relieved by Gary Swartz (Weston)
1505 Elmer off site

186

Monday
8-13-07

Cannelton Industries
Sault Ste Marie, MI / USEPA
0650 Elmer Van Wagner relieve Diane Russell (Weston)
MCM dredging station 190 Lane 4a. Jim
Hauter (Envirocon) on board dredge.
0712 stop dredging, shuttle change out.
Weather: clear, 58°F, calm.
Turbidity curtain has been compromised at
west shoreline end. Identified this situation
to Jim Hauter (Envirocon) who notified MCM
Supervisor.
0753 resume dredging (MCM)
0800 CRA on site to perform conformation sediment
sampling (2 CRA staff)
0815 Elmer to check integrity of turbidity curtain
0946 stop dredging, full shuttle
0950 Elmer + Andy Kiel conduct oversight of
Conestoga Rover confirmation sampling
1016 MCM resume dredging
1045 pivot north,
1118, MCM fuel boat is pinned between ~~tur~~
silt curtain & barge. Motor on boat is torqued
MCM working to free engine + boat,
stopped dredging to free boat & shift change.
1133 MCM move forward Station 200 Lane #a
1133-1230 shift change
1230 resume dredging
1303 water level 600.7 ft
1313 stop dredging full shuttle
Elmer + Andy Kiel pick up Andy Ravis @ dock.
1345 resume dredging
1430 - pick up CRA staff to perform confirmation
sampling. Elmer shadow Andy Ravis to get
comfortable with shift duties.
1530 Elmer leave site for day

Tuesday
8-14-07

Cannelton Industries
Sault Ste Marie, MI / USEPA
0630 Elmer relieve Diane Russel (Weston)
White Lake + MCM dredging
0650 Elmer pick up Andy Kiel (Weston) at dock
0745 Andy Kiel leave site for day
0800 White Lake resume dredging
MCM grounded due to water level at 599.7 ft
Conestoga Rovers (2 staff) on bay collecting
confirmation samples. Jim Hauser (EnviroCon)
is on MCM barge.
Doetsch Contracting is preparing for shoreline
restoration activities
0830 MCM resume dredging, water level back
up to 600.5 ft.
Elmer inspected turbidity curtain, all ok..
gap in east end near piling
Elmer check MCM empty shuttle at Dredge 56
approximately 3 inches of water in bottom of
pig pen. Elmer inform Bob Everitt (MCM Super-
visor) to instruct off loading operations to
keep pumping water off barges so they do not
come back w/ excess water.
0904 White Lake stop dredging, change out
full shuttle.
0910 White Lake resume dredging
Doetsch staging conveyance piping at shoreline
0915 White Lake pivoting / moving to west, readjusting
working silt curtain
Afternoon: LAST two days of MCM dredging the
loads have been + 60% wood debris.
0949 White Lake stop dredging full shuttle
0951 MCM resume dredging
1009 - White Lake barge #4 came back empty w/ 2" of
water in pigpen.

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Cannelton Industries
Sault Ste Marie, MI / USEPA

Tuesday
8-14-07

1010 water level is 600.5 ft
1013 White Lake resume dredging
1040 Chris Lantinga (Weston) on site
1100 MCM stop dredging, full shuttle.
1100 White Lake stop dredging
1118 shift change for MCM staff
1130 - 1408 Elmer + Chris Lantinga go to Lunch, discuss shoreline restoration, talk to CRA, Envirocon + Nativescape shoreline contracting company regarding shoreline restoration.
afternote: 1041 White Lake stop dredging, low water, resumed dredge @ 1042.
White Lake stop dredging @ 1235 full shuttle
1307 White Lake resume dredging
1337 White Lake stop dredging
1430 600.8 feet water level.
Afternote:
MCM activities: 1100 stop dredging, full shuttle, 1118 shift change MCM; 1251 ~~bar~~ EW empty barge back, resume dredging; 1254 pivot to south; 1300 move forward Lane 4A Station 230, resume dredging. 1421 full shuttle change out.
Andy Davis (Weston) on site. Andy watching shoreline restoration activities
1451 water level is 600.9 ft
1455 MCM resume dredging
1524 White Lake dredge full shuttle (stop dredging)
afternote: Norm Clingan relieve Jim Hauter @ Envirocon at 14:30
1640 White Lake full shuttle stop dredging
1640 MCM stop dredging full shuttle
1700 Elmer to MCM barge
1800 Elmer pick up White Lake staff from barge

Cannelton I
Sault Ste M
and transp
MCM barge
1840 Elmer
Site @ 19

Tuesday
8-14-07

Cannelton Industries
Sault Ste Marie, MI / USEPA
and transport to shore. Elmer also return to
MCM barge who are moving to Dredge Lane 5a
1840 Elmer + Andy to Dock Elmer leave
site @ 1900

EW

Tuesday
8-14-07

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Envirocon + Native scope
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8-15-07
Wednesday

Cannelton Industries
Sault Ste Marie, MI / USEPA
0630 Elmer VanWagner / Robert (CRA) on site
White Lake + MCM dredging. (Derek (Envirocon)
is on White Lake barge.
0700 White Lake advancing to SW
0710 turbidity curtain open by MCM
0800 turbidity curtain closed
MCM stop dredging full shuttle (700)
0818 Elmer + Robert to White Lake barge.
White Lake is moving to new lane. NativeScape/
Doetsch on site for shoreline restoration
Jim Hauter is Envirocon rep. on MCM barge
0830 MCM resume dredging
0835 MCM moving forward
0846 Doetsch begin shoreline restoration
0921 MCM was working Lane 5a, Station 75
~~moved bac~~ (south) in north half of Lane 5a. Stepped
back to lower half of Lane 5a, Station 40.
0928 White Lake stop dredging, full shuttle
Elmer take Robert (CRA) to shore
0958 MCM stop dredging, full shuttle
1010 MCM resume dredging
1030 White Lake stop dredging, full shuttle
1039 White Lake resume dredging
1040 Elmer transport CR reps. around bay
1100 Elmer talk to Chris Lehr of shoreline restoration
group regarding finished shoreline restoration distances
and seed mixtures. He will coordinate with
his partner + provide me with quantities + linear
feet of socks completed
1130 shift change / shuttle changeout for MCM
1115 White Lake shuttle full stop dredging
1139 MCM adjusting silt curtain
1145 MCM resume dredging

Cannelton
Sault Ste.
MCM
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~~1215 C~~
1145-121
out to
1218 C
1215 MC
1253 W
1300
Tour
Back
Collect
1340 MC
1340 W
1341 Wate
1400

15-07
Wednesday
(CRA) onsite
reK (Envirocon)
W-
MCM
rtl (700)
Lake barge.
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restoration
Sa. Station 75
Sa. Stepped
Station 40.
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dredging

Cannelton Industries
Sault Ste. Marie, MI / USEPA
Wednesday

MCM currently dredging lane 5a Station 85
1145 water level is 600.7 ft
~~1215 Elmer~~
1145-1218 Elmer provide transport to CRA reps. out to Dredge 56 for tour around dredge
1218 CRA leave site.
1215 MCM stop dredging, full shuttle
1253 White Lake resume dredging
1300 Elmer pick up Chris Lantinga + Steve Berry (Weston)
Tour/inspect White Lake barge
Backnote: Turbidity readings/measurements were not collected on 8-13 & 8-14-07 due to rough/choppy conditions
1340 MCM resume dredging
1340 White Lake ~~move~~ reposition shuttle
1341 water level is 600.3 ft
1400-1411 Chris Lantinga / Steve Berry (Weston) Inspect MCM barge.
1412 Chris + Steve transported to Dredge 56 by Bob Everitt (MCM). Envirocon shift change — Jim Hauter replaced by Norm Clingan. Skip Simpson on White Lake barge
1416 White Lake stop dredging - full shuttle.
1433 Skip Simpson leave White Lake barge
1430-1440 pivot White Lake barge to north
1440 resume dredging (White Lake)
1600 stop dredging (White Lake) full shuttle
1630 Andy Ravis + Elmer collect turbidity readings
afternote: 1400 Andy Ravis on MCM barge
1721 Andy + Elmer complete turbidity readings.
1730 - White Lake grounded.
1739 - water level is 599.8 ft
Elmer talk to Chris Lehr of shoreline restoration crew and told him we need to have a summary of the qty →

8-15-07
Wednesday

Cannelton Industries
Sault Ste Marie, MI / USEPA
in linear feet the total feet of sock filled, diameter, fill mixture for each sock, etc.
1754 Derek of Envirocon talked to Joe @ shoreline restoration crew same thing. EC
1800 Elmer walk the shoreline & take pictures water level 599.9 ft EC
1900 Chris Lantunga / Annette Dickinson (Weston) in boat filming shoreline restoration and bay activities. EC
2005 Elmer / Chris / Annette off site
EC

Cannelton Industries 8-16-07
Sault Ste Marie, MI / USEPA Thursday
0800 Elmer VanWagner on bay. Very rough conditions +30mph winds, clear, 60's
Elmer relieve Diane Russel @ 0825 from MCM dredge barge. Jim Hanter (Enviro con) on MCM barge. Elmer to White Lake barge. Elmer pick up Kyle (CRA) & transport to White Lake barge. Derek Green (Enviro con) on White Lake barge.
White Lake dredging 7:25 to 7:55
" " " 8:42 to 9:15
0915 White Lake stop dredging full barge
White Lake currently dredging Lane J approx. Station 100.
Shoreline restoration crew at cross section K-K'
0932 MCM opening turbidity curtain
MCM dredge barge @ Station 158 Lane 5a.
MCM dredge @ 0820.
MCM stop dredge @ 0920 due to scow change & opening turbidity curtain
0943 Water level 600.6 ft
1000-1005 White Lake readjust silt curtain
1005-1035 inspect scow changeout
1035-1050 Inspect shoreline restoration
1055 pick up Andy Ravis @ dock for MCM barge oversight
1110 water level 601 ft
Kyle (CRA) + Derek Green (Enviro con) leave barge
White Lake resume dredging
1100 turbidity curtain closed scow changeout complete
1135 MCM shift change
1148 Elmer pickup Brett Bishop (Enviro con) to

Cannelton Industries
Sault Ste. Marie, MI / USEPA

8-16-07
Thursday

take over for Derek Green
1150 White Lake stop dredging, full shuttle.
1215 Chris Lantinga on board
~~1340 White Lake resume dredging~~
1345 resume dredging (White Lake).
1400 White Lake move back to clean Lane.
1405 resume dredging (White Lake)
1430 stop dredging, full shuttle (White Lake)
1440 water level 600.9 ft
1515 water level is 601 ft
1515 resume dredging, Elmer called Chris Lantinga regarding depth to dredge. White Lake has dredged to print grade at current location (Dredge Lane J, approximate location Station 50 to 100 ft. Chris said/approved dredging to sand, which is deeper than print grade. Dark organic rich material mixed with wood debris has been encountered at the print grade. White Lake is overdredging to the sand.
1613 stop dredging (White Lake) full shuttle
1625 resume dredging
afternote: Robert Bressan (CRA) and Bruce Van Otten (MDEQ) on site, inspecting shoreline restoration
No turbidity measurements were collected due to high wind + very choppy water conditions
1720 water level is 600.7 ft
1738 Bruce Van Otten (MDEQ) + Robert Bressan (CRA) off site after inspecting shoreline restoration.
1749 White Lake operator notes sulfurous odor while overdredging
1800 White Lake stop dredging full shuttle
White Lake pulling empty barge into place for

Cannelton Inde
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Lennelton Industries
Sault Ste. Marie, MI / USEPA

8-16-07
Thursday

dredging activities in morning, also readjust silt curtain along shoreline where dredging complete. Shoreline restoration crew is currently located ~~at~~ 150 north of cross-section G-G'

1820 White Lake shut down for day.

1845 White Lake off site

1850 Elmer to shore to talk to Chris Lehr regarding shoreline reconstruction quantities

2000 Elmer walk shoreline to take photos of restoration progress.

2030 Elmer complete walk of shoreline,

2040 Elmer leave site

Cannelton Industries
Sault Ste Marie, MI / USEPA

FRIDAY
8-17-07

0700 Elmer relieve Diane Russel (Weston) MCM, White Lake, Shoreline Restoration (Doetsch) on site, Brett Bishop (Envirocon) on White Lake barge, Jim Hauter (Envirocon) on MCM barge
Kyle (CRA) conducting confirmation sampling,
Weather: partly cloudy, slight breeze, 60°F,
0700 MCM change out full shuttle and resume dredging
0640 White Lake start dredging
Backnote: Skip Simpson off site @ 0700
0735 White Lake stop dredging - full shuttle
0740 White Lake resume dredging
0820 Chris Lantinga + Robert Bressan (CRA) on site.
0830 Chris Lantinga leave site
0835 White Lake pivot south
White Lake readjusting silt curtain
White Lake move north
0840 stop dredging (White Lake) (full shuttle)
0920 White Lake start dredging
0929 601.1 ft is water level
0949 MCM stop dredging full shuttle
Wind has picked up, very choppy outside + inside turbidity curtain
Water level is 601.2 ft
MCM barge is approximately 75% wood
1019 White Lake stop dredge, full shuttle
1025 Wind picked up + raining
1034 MCM start dredge
1100 Andy Ravis (Weston) on MCM barge
White Lake readjusting silt curtain, move barge
White Lake is in Dredge Lane 1
1141 turbidity curtain is being repaired due to high winds.

Cannelton Industries FRIDAY 197

Sault Ste. Marie, MI / USEPA 8-17-07

1130 shift change MCM

1159 water Level 601.3

*Afternote 1035 White Lake resume dredging

1108 White Lake stop dredging, full shuttle

1330 White Lake resume dredging

1410 resume dredging

1450 Stop dredging, full barge

1500 Bob Everitt call work stoppage due to high winds + rough water. Turbidity curtain has been displaced approx. 75 feet south + east at west end. Working silt curtains for MCM + White Lake are pushed out of working area by wave + wind action.

1800 Bob Everitt call off work for day due to high wind + waves

Elmer + Andy Ravis to office / paperwork

Doetsch still on site

Afternote: No turbidity due to high wind + water

Cannelton Industries 8-18-07
Sault Ste Marie, MI USEPA SATURDAY
0615 Elmer on site w/ White Lake dredging.
Andy Ravis (Weston) Derek Green (Envirocon)
Jim Hauter (Envirocon) on site. Robert Bresson
(CRA) + Doetsch on site. White Lake move
to shoreline + pick up concrete pilings. White
Lake move to SW corner of Tannery Bay to
excavate "shelf" behind restoration socks.
Doetsch disassemble piping so White Lake
can "belly up" to shoreline for excavation
work. MCM on site. MCM plans to readjust
turbidity curtain
0740 White Lake begin excavation activities.
0820 White Lake stop excavation, full shuttle
0825 Water level 600.7 ft
0840 Elmer pick up Chris Lantinga
Doetsch placing 3rd sock starting @ location
K-K'
0905 Chris Lantinga off site
0912 White Lake resume dredging
0946 White Lake stop dredge, full barge.
MCM fixing turbidity curtain. Dredge 56
hydraulic problem.
1030 White Lake resume excavation
1045 White Lake complete excavation, move to
small stream along west dredge boundary.
1100 White Lake begin dredge stream mouth.
1120 Stop dredge, move to DMU-18 shoreline
full shuttle
1223 W.L. resume dredging
After note: Elmer + Chris Lantinga inspect turbidity
curtain... One tear noticed near barge (Dredge 56)
and one seam west of dredge 56 opened. Elmer
inform Derek Green (Envirocon) of condition.

Cannelton Industries 8-18-07

Sault Ste. Marie, MI / USEPA Saturday

1251 White Lake move, resume dredging

1315 White Lake stop dredge, full barge

1430 Skip Simpson on MCM dredge.

1442 White Lake resume dredging

1515 stop full shuttle (White Lake)

1618 Elmer + Andy Ravis collect turbidity measurements

1638 White Lake resume dredging

1712 White Lake stop to fuel trackhoe

1718 White Lake moving dredge, moving full shuttle to Dredge Site

Afternote: Wayne (MCM) surveying the top of shoreline restoration socks

1800 White Lake mob off site

1900 Elmer + Andy Ravis off site, go to trailer @ MCM yard.

SUNDAY
8-19-07

200
Cannelton Industries
Sault Ste Marie, MI / USEPA
0830 Elmer on site, White Lake Bayl.
Andy Ravis (Weston) oversight for MCM + White Lake. Elmer passed information to Andy regarding tracking progress of all subs on site.
1030 Elmer off site, to MCM yard

116 Sault Ste Marie
USEPA/Cannelton

Tues
6/5/2007

1030	J. Dillon arrived onsite.
1045	J. Dillon walked around site to check on barge maintenence operations.
1105	Returned to site trailer.
1115	J. Dillon departed site trailer to go to Radio Shack and FedEx.
1215	Returned from FedEx and Radio Shack.
1230	Walked around site to check on setup operations.
1300	~~Returned~~ Returned to trailer. Performed misc. tasks to prepare for ~~the~~ dredging activities.
1815	Departed site for the day

J. Dillon 6/5/2007

Tues
6/5/2007

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Sault Ste Marie
USEPA/Cannelton

Wed
6/6/07

0830 J. Dillon arrived on site.
0845 Walked through the yard to check on setup operations. Barge 60 is being taken off the dry dock. Barges will be shuttled around to setup for operations.
Barge 55 and crane are being worked on.
0929 Returned to site trailer.
1005 J. Dillon departed site yard with K. Kidder - headed to bay to perform water level measurements to ensure that our water level measurement system was working properly.
* Days field notes were written in K. Kidders logbook.
1630 Departed bay headed back to site yard.
1835 Departed site yard for the day

J. Dillon 6/6/07

118 Sault Ste Marie
Cannelton/USEPA

Sat
6/9/07

2200 J. Dillon arrived at site yard gathered up equipment and PPE for night shift activities —

2225 Departed yard for bay to relieve K. Kidder. —

2245 Arrived a bay met K. Kidder and C. Lantinga. Went over oversight ~~prod~~ procedures and current dredging activities. —

2315 K. Kidder and C. Lantinga departed bay. —

2325 MCM stopped dredging and switched out loaded barge. —

2340 Empty load barge in place — full load barge taken to — be off loaded. —

MCM pulled spud on crane — barge and moved forward — up the access channel. —

2351 Crane barge re-spuded and — resumed dedging. —

2405 MCM personel switched — out. —

Dredging stopped. —

2410 Dredging resumed. —

0150 *6/10/07* MCM is ~~switching~~ switching out load barges. Dredging stopped.

0211 Full loaded barge removed. Empty load barge is being moved into ~~pot~~ position by crane. Empty load barge is stuck.

0215 Empty load barge unstuck and tied up to crane barge. Dredging resumed.

0238 J. Dillon and crane barge operator

0318

0325

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0425

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0453

0630

Sat
6/9/07

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Sun Ste Marie
Cannelton/USEPA

Sun 119
6/10/07

noticed flames shooting out of
barge ~~59 or 60~~ 56 exhaust pipe
for their generator. Crew aboard
the barge shut down generator and
are investigating the cause of the
fire. Dredging operations are
continuing. Barge ~~59 or 60~~ 56 has
no work lights. Some crane that
is off loading the load barges
is working slowly.

0318 Still no generator or lights operating
on barge ~~59/60~~ 56
Crane barge pulled its spud and
moved the crane ~~to~~ ~~the~~ moved the
barge and load barge further
along the access channel

0326 Dredging continued.

0328 The barge 59/60 generator is
running. No sign of fire coming
out of exhaust pipe.

0415 MCM is changing out load barges.
Full barge will be removed first
and staged over at barge 56.
Then the empty load barge will
be brought over and tied up to the
crane barge.
Full Barge is stuck on a sand bar.

0425 Full load barge is loose and has
been staged at barge 56

0440 Empty load barge in place

0453 Dredging continued.

0630 Computer on the crane stopped
working. 3/4 Full load barge was

120 Sault St. Marie — Sun
Cannelton/USEPA — 8/10/07

removed from along side crane barge. Empty barge - load barge was placed along side crane barge.

0655 MCM needs new power strip for inside the crane to run the computer. J. Dillon gives them a power strip that he had. — did not fix the problem. J. Dillon had MCM run an extension cord from the generator to the crane to supply power to the computer system for the crane. It worked —

0710 Dredging Continued - EnvironCon crew change-out. —

0730 D. Russel on Site. J. Dillon departed the bay. —

0800 J. Dillon @ site yard completed logbook, signed out. Shift completed departed site yard —

2215 J. Dillon arrived at site yard trailer. Picked up equipment signed in and departed for bay. —

2245 Met K. Robber out at the bay. Went over current operations.

2315 MCM switched out load barges —

2335 Load barges switched out. Dredging resumed. —

2355 MCM employee used microwave in trailer and blew a fuse in the

Sun
6/10/07

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J. Dillon

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Saul + St. Marie
Cannelton / USEPA

Mon
6/11/07

generator switch board. Computer
~~on~~ the crane is down, light tree
is down - dredging stopped.

0105 * 6/11/07 Dredging Resumed.
without computer monitoring
system.

0115 Wayne Cross with MCM arrived
on site. W. Cross got the
computer system on the crane
~~operating~~ operating correctly.

0145 Dredging resumed. Barge 55
is going to be taken back to
site yard early this morning
in order for it to be off loaded
tomorrow and then brought back
out to the bay in the afternoon.

0230 MCM crew members are removing
the shirt to allow access for
the tugboat when it arrives
and to allow the barge 55 and
tug to exit the bay.

0300 Finished Dredging. Load barge is
full.

0315 MCM went to get tugboat

0330 MCM crane operator, deck hand,
EnviroCon, and J. Dillon went
over to dredge 56 and prepared
Barge 55 for tugboat arrival

0410 Finish preparing barge 55

0455 Tugboat called and said that they
would not be arriving until ~0600

0510 J. Dillon and EnviroCon departed
the barge.

Sault St. Marie

Cummelton/USEPA

Mon 6/11/07

0530 Drove to site yard.

0545 Arrived at site yard dropped off equipment, completed logbook.

0600 Departed site yard shift completed.

1430 Arrived at site yard to start 2nd shift.

~~1~~ 1530 Assisted A. Dickenson with grab samples from sediments that have been staged at the site yards pad

1600 Dropped samples off at FedEx to be shipped to lab

1635 Returned to site yard

1720 Departed site yard for the bay.

1735 Arrived at the bay with A. Dickinson

1747 Collected water level reading with measuring tape = 35 1/2 from TOC to water level.

1750 Down loaded water level measurem

1752 Collected water level reading again with measuring tape = 35 3/4" TOC to water level.

1800 A. Dickinson departed the bay.

1815 C. Lantinga arrived at the bay. J. Dullar and Lantinga walked the area to the west of the bay that needs to be dredged. Built small dock for Zodiak

Mon
6/11/07

Sault St. Marie
Carmelton/USEPA

Mon
6/11/07

1910 Took Zodrah out to go check on the barges.
2000 Arrived back at the bay. Tug is hooking up barge 55 to dredge 56.
MCM crews are closing curtain and preparing to resume dredging.
2105 Dredging resumed.
2115 MCM switch out load barges
2146 Barbes switch. Dredging Resumed.
2200 Used surveyors tape to mark off swing radius of crane
2300 K. Kidder on site at the bay crane barge
Went over operations
2334 J. Dillon departed the bay.
End of shift

J. Dillon 6/11/07

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/12/07	3. Time Prepared 1500 - 2300
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 2nd Shift (1500 - 2300)

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
1445	Arrived at site yard.
1450	Departed site yard for bay to download water level data and perform dredging oversight.
1500	Arrived at bay trailer.
1520	Downloaded water level data. Water Level: Before: TOC to WS = 35.75'' (WL = 603.27' - 2.98' = 600.29') After: TOC to WS = 36.13'' (WL = 603.27' - 3.01' = 600.26')
1535	C. Lantinga on site. D. Russel departed the bay.
1600	J. Dillon and C. Lantinga loaded turbidity equipment into the Zodiak and headed outside the bay/curtain to collect turbidity readings.
1634	Checked calibration of Turbidity meter: 1.0 NTU = 0.91 NTU 10.0 NTU = 10.0 NTU
1636	Collected water sample approximately ~ 100' north from the center of dredge 56: 0.54 NTU
1638	Collected water sample approximately ~ 200' north from the center of dredge 56: 0.78 NTU
1705	Docked up to crane barge.
1737	Stopped dredging. Preparing to switch out barges 55 and 56.
1745	MCM is removing the curtain and preparing to switch out barge 55 (full) with barge 56 (empty).
1750	Measured the draft of loaded shuttle scow: 2.5' from surface of water to bottom of barge.
1828	Barge 55 and 56 have been switched. Dredging resumed.
1900	J. Dillon headed over to check out barge 56 to ensure that MCM cleaned out all the debris prior to use. Majority of debris has been removed. 3 photos taken.
1941	MCM switched out full shuttle scow.
2017	Scows switched. Resumed dredging.
2030	Stopped dredging. Crane operator is performing maintenance on crane/bucket.
2050	Dredging resumed.
2105	Asked MCM to mark out the swing radius of the crane and to wrap their oxygen and acetalyne tanks with a chain.
2120	MCM completed swing radius barrier and wrapped tanks with chain.

9. Prepared by (Name and Position)
Jody Dillon

Activity Log	
Time	**Major Events**
2200	MCM is switching out loaded shuttle scow. Dredging stopped.
2226	Scows switched. Dredging resumed.
2251	Shift switch Envirocon.
2300	MCM is moving the crane barge forward. ~15'
2305	Picked up K. Kidder with the Zodiak and brought him to the crane barge. Went over current operations.
2325	J. Dillon took Zodiak to shore and docked it.
2340	J. Dillon departed the bay. Shift completed.

9. Prepared by (Name and Position)

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/13/07	3. Time Prepared 1500 - 2300
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 2nd Shift (1500 - 2300)

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
1300	Arrived at site yard to prepare paper work and pick up equipment.
1420	Departed site yard for bay.
1430	Arrived at bay to collect water level readings, turbidity readings and to relieve D. Russel.
1445	Performed boat inspection.
1450	Loaded up equipment into boat and went out to meet D. Russel at the crane barge.
1455	Picked up D. Russel and headed out into the river to collect turbidity readings (See D. Russel's notes) and trained D. Russel how to operate the boat (Zodiac).
1600	Returned to the bay and down loaded the water level readings. (See D. Russel's notes)
1615	Dropped D. Russel off on shore and returned to the crane barge to oversee dredging.
1650	Switched out shuttle barges. Dredging stopped.
1655	Crane barge moved forward.
1709	Shuttled barges switched. Dredging resumed.
1808	Dredging stopped. Crane Barge is moving ahead.
1613	Dredging resumed.
1824	Switched out shuttle barges. Dredging stopped.
1840	Shuttle barges switched. Dredging resumed.
1945	MCM shift change. Dredging stopped.
1955	Shift change completed. Switching out shuttle barges.
2025	Shuttle barges switched. Dredging resumed.
2055	Moved crane barge forward. Dredging stopped.
2109	Barge set. Dredging resumed.
2125	EviroCon and Weston collected some turbidity readings just out side of the curtain.
2125	EviroCon and Weston collected some turbidity readings just out side of the curtain.
2136	Collected and analyzed a water sample from ~ 100 feet north of the center of barge 56. 0.73 NTU
2144	Collected and analyzed a water sample from ~ 200 feet north of the center of barge 56. 0.44 NTU
2150	Returned to crane barge.
2200	Stopped Dredging. Crane barge moved forward.
2208	Barge set. Resumed dredging.
2228	Switching out shuttle barges. Dredging stopped.
2240	Mounted video camera 1 (operators view) on the outside of the crane. Marked area where holes need to be drilled to mount video camera 2 (crane monitor view) on the inside of the crane operators cab area.
2255	Shuttle barge switch completed. Dredging resumed
2310	Departed barge to pick up K. Kidder.

2315	Picked up K. Kidder and returned to crane barge.
2320	Went over current operations with K. Kidder.
9. Prepared by (Name and Position) Jody Dillon	

Activity Log	
Time	**Major Events**
2330	Departed the crane barge, and docked boat.
2338	Departed the bay. Shift completed.

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/14/07	3. Time Prepared 1500 - 2300
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 2nd Shift (1500 - 2300)

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
1400	Arrived at yard site trailer. Signed in and picked up equipment.
1410	Departed yard for bay.
1425	Arrived at bay to do turbidity readings and to which out with D. Russel.
1430	Arrived at boat in bay with equipment. Boat is out of gas.
1435	Departed bay to go get gas.
1450	Arrived back at boat in bay and headed out to crane barge.
1455	Arrived at barge. D. Russel off site.
1501	Switching out shuttle barges. Dredging stopped.
1505	Examined camera equipment. One camera is working but is now missing its antenna. The other camera has apparently been taken back to the site yard trailer by C. Lantinga.
1528	Departed crane barge by boat to go and collect turbidity readings.
1538	Calibrated turbidity meter.
1543	Collected a turbidity reading ~ 200' outside the curtain and directly north of the dredging barge. GPS Mark 19 (N46°29.852', W084°23.366') Turbidity = 0.87 NTU
1548	Collected a turbidity reading ~ 100' outside the curtain and directly north of the dredging barge. GPS Mark 20 (N46°29.817', W084°23.353') Turbidity = 1.03 NTU
1553	Collected a turbidity reading ~100' to the north of the west side of the curtain. GPS Mark 21 (N46°29.786', W084°23.466') Turbidity = 0.03 NTU
1558	Collected a turbidity reading ~100' to the north of the east side of the curtain. GPS Mark 22 (N46°29.850', W084°23.289') Turbidity = 1.10 NTU
1600	Headed back inside of the curtain to collect turbidity readings.
1605	Collected a turbidity reading ~200' to the north of the crane dredging barge inside the curtain. GPS Mark 23 (N46°29.784', W084°23.322') Turbidity = 3.95 NTU
1610	Collected a turbidity reading ~100' to the north of the crane dredging barge inside the curtain. GPS Mark 24 (N46°29.726', W084°23.284') Turbidity = 6.13 NTU
1615	Returned to crane barge.
1625	Shuttle barges switched. Crane refueled. Dredging continued.
1705	Dredging black sediment (appears to be coal mixed with sand). Along the shoreline there are remnants of what appears to be an old loading platform.
1808	Shuttle barges are being switched. Dredging stopped.
1835	Shuttle barge switch completed. Dredging continued.
1940	Shuttle barges are being switched. Dredging stopped.
1945	MCM shift change. Replacement arrived.
2018	Shuttle barges switched. Crews switched. Dredging resumed.
2130	Barge moved forward. Dredging stopped.

3138	Barge reset. Dredging resumed.
2210	Switched out shuttle barges. Dredging stopped.
2230	Shuttle barges switched. Dredging resumed.
2300	K. Kidder arrived at the crane barge. Went over current operations.
9. Prepared by (Name and Position) Jody Dillon	

Activity Log	
Time	**Major Events**
2310	Departed the crane barge and took the zodiac to the beach.
2315	Departed the bay. Shift completed.

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/15/07	3. Time Prepared 1500 - 2300
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 2nd Shift (1500 - 2300)

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
1435	Arrived at yard site trailer. Signed in and grabbed equipment.
1445	Departed the site trailer for bay.
1455	Arrived at bay. D. Russel picked me up and dropped me off at the crane barge. * Initial barge location at the start of my shift was 575.
1500	Dropped D. Russel off at the shore. D. Russel departed the bay.
1530	Headed out into the river to collect turbidity readings.
1540	Calibrated turbidity meter.
1547	Collected a turbidity reading ~ 200' outside the curtain and directly north of the dredging barge. GPS Mark 25 (N46°29.883', W084°23.402') Turbidity = 1.05 NTU
1550	Collected a turbidity reading ~ 100' outside the curtain and directly north of the dredging barge. GPS Mark 26 (N46°29.834', W084°23.371') Turbidity = 1.08 NTU
1604	Collected a turbidity reading ~100' to the north of the west side of the curtain. GPS Mark 27 (N46°29.737', W084°23.459') Turbidity = 1.46 NTU
1607	Collected a turbidity reading ~100' to the north of the east side of the curtain. GPS Mark 28 (N46°29.843', W084°23.329') Turbidity = 2.31 NTU
1610	Headed back inside of the curtain to collect turbidity readings.
1614	Collected a turbidity reading ~200' to the north of the crane dredging barge inside the curtain. GPS Mark 30 (N46°29.763', W084°23.310') Turbidity = 4.41 NTU
1617	Collected a turbidity reading ~100' to the north of the crane dredging barge inside the curtain. GPS Mark 31 (N46°29.707', W084°23.231') Turbidity = 8.15 NTU
1620	Returned to crane barge.
1624	Arrived at crane barge. MCM is refueling crane. Dredging stopped.
1630	Switching out shuttle barges.
1645	Shuttle barges switched. Dredging resumed.
1811	Crane barge moved ahead.
1825	Shuttle barges being switched. Dredging stopped.
1935	Crane barge moved ahead.
1945	MCM shift change. Dredging stopped.
2000	Shift change completed. Dredging resumed.
2028	Shuttle barges being switched. Dredging stopped.
2059	Switch completed. Dredging resumed
2238	Shuttle barges being switched. Dredging stopped.
2305	Switch completed. Dredging resumed. K. Kidder arrived at the barge. *Final location when I departed the barge 600.
2310	Departed barge for the shore.

2320	Departed the bay. Shift completed.

9. Prepared by (Name and Position)

Jody Dillon

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/16/07	3. Time Prepared 0700 - 1900
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period Shift (0700 - 1900)

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
0655	Arrived at the bay and was picked up at the beach by K. Kidder.
0710	Assisted K. Kidder with collecting water levels.
0725	Finished collecting water level data. Dropped K. Kidder off at the beach.
0730	Returned to the crane barge. *Location at the beginning of my shift was 603.
0750	MCM shift change. Dredging stopped.
0800	Shift change completed. Dredging resumed.
0810	Barged moved forward to 605.
0916	Switching out shuttle barges. Dredging stopped.
0937	Switch completed. Dredging resumed.
1045	Switching out shuttle barges. Dredging stopped.
1106	Switch completed. Dredging resumed.
1120	Picked up A. Dickinson at the dock and headed out of the bay to collect turbidity readings.
1128	Calibrated turbidity meter.
1132	Collected a turbidity reading ~ 200' outside the curtain and directly north of the dredging barge. GPS Mark 32 (N46°29.836', W084°23.351') Turbidity = 0.68 NTU
1133	Collected a turbidity reading ~ 100' outside the curtain and directly north of the dredging barge. GPS Mark 33 (N46°29.867', W084°23.369') Turbidity = 0.27 NTU
1134	Collected a turbidity reading ~100' to the north of the west side of the curtain. GPS Mark 34 (N46°29.783', W084°23.435') Turbidity = 0.29 NTU
1135	Collected a turbidity reading ~100' to the north of the east side of the curtain. GPS Mark 35 (N46°29.825', W084°23.277') Turbidity = 0.52 NTU
1136	Headed back inside of the curtain to collect turbidity readings.
1137	Collected a turbidity reading ~200' to the north of the crane dredging barge inside the curtain. GPS Mark 36 (N46°29.779', W084°23.322') Turbidity = 1.78 NTU
1138	Collected a turbidity reading ~100' to the north of the crane dredging barge inside the curtain. GPS Mark 37 (N46°29.722', W084°23.287') Turbidity = 4.67 NTU
1145	Finished collecting turbidity readings. Return A. Dickinson to the dock.
1215	Switching out shuttle barges. Dredging stopped.
1240	Switch completed. Dredging resumed.
1345	Switching out shuttle barges. Dredging stopped.
1430	Switch completed. Dredging resumed.
1545	Switching out shuttle barges. Dredging stopped.
1608	Switch completed. Dredging resumed.
1717	Switching out shuttle barges. Dredging stopped.

1740	Switch completed. Dredging resumed.
1808	Unleashed crane and repositioned it. Dredging stopped.
1810	Crane repositioned. Dredging continued.

9. Prepared by (Name and Position)

Jody Dillon

Activity Log	
Time	**Major Events**
1845	Crane barge moved forward. Dredging continued.
1900	Crane barge moved forward. *Final position at the end of my shift was 700. Dredging continued.
1910	Departed the barge for shore. K. Kidder arrived at the bay and headed out to the barge.
1920	Departed the bay. Shift completed.\

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/17/07	3. Time Prepared 0700 - 1900
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period Shift (0700 - 1900)

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
0645	Arrived at the bay and headed out to the crane barge.
0700	MCM crews have been working through the night on fixing leaks and sealing up the holes in the shuttle barges containment areas.
0715	Checked both shuttles. The silicon used on both of the shuttles is still going to take several hours to cure. Dredging activities will not resume for at least a couple of hours.
0740	Departed the crane barge for the shore.
0750	Departed the bay for the yard.
0920	Arrived at the bay with A. Dickinson to collect water levels.
0945	Finished collecting water levels. (See A. Dickinson notes*). Departed the bay for the yard.
1000	Arrived at site yard. Finished up notes and expense report for the week.
1230	Returned to the bay and took the zodiac out to the crane barge.
1245	Dredging started. *Station location at the beginning of shift 700.
1335	Crane barge moved forward to location 713.
1420	Switching out shuttle barges. Dredging stopped.
1440	Switch completed. Dredging resumed.
1555	Switching out shuttle barges. Dredging stopped.
1625	Switch completed. Dredging resumed.
1625	Departed barge to collect turbidity readings with EnviroCon
1630	Calibrated turbidity meter.
1634	Collected a turbidity reading ~ 100' outside the curtain and directly north of the dredging barge. GPS Mark 38 (N46°29.831', W084°23.348') Turbidity = 0.72 NTU
1636	Collected a turbidity reading ~ 200' outside the curtain and directly north of the dredging barge. GPS Mark 39 (N46°29.873', W084°23.366') Turbidity = 0.91 NTU
1639	Collected a turbidity reading ~100' to the north of the west side of the curtain. GPS Mark 40 (N46°29.748', W084°23.471') Turbidity = 0.35 NTU
1642	Collected a turbidity reading ~100' to the north of the east side of the curtain. GPS Mark 41 (N46°29.838', W084°23.285') Turbidity = 1.33 NTU
1645	Headed back inside of the curtain to collect turbidity readings.
1649	Collected a turbidity reading ~200' to the north of the crane dredging barge inside the curtain. GPS Mark 42 (N46°29.784', W084°23.321') Turbidity = 3.44 NTU
1653	Collected a turbidity reading ~100' to the north of the crane dredging barge inside the curtain. GPS Mark 43 (N46°29.716', W084°23.284') Turbidity = 11.8 NTU
1655	Finished collecting turbidity readings. Return to crane barge.
1705	Crane barge moved ahead. Location 756.
1750	Switching out shuttle barges. Dredging stopped.

1813	Switch completed. Dredging resumed.
1901	Crane barge moved forward. Location 765.
1920	Departed crane barge to switch shifts with K. Kidder.
1930	Departed the bay shift completed.

9. Prepared by (Name and Position)

Jody Dillon

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/18/07	3. Time Prepared 0700 - 1500
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 1st

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
0650	Arrived at bay and met up with K. Kidder. Went over current operations.
0700	Took the zodiac out to the crane barge. K. Kidder departed the bay.
0705	Arrived at the crane barge. Beginning location 779.
0723	Crane barge moved forward. New location 792.
0743	Switched out shuttle barges. Dredging stopped. MCM shift change.
0810	Switched completed. Shift change completed. Dredging resumed.
0945	Crane barge moved back to location 700. There was a high spot found by EnviroCon Possibly the high spot the night crew got their tug and barge stuck on.
0955	Barge reset. Dredging resumed.
1045	Switched out shuttle barges. Dredging stopped. MCM shift change.
1112	Switched completed. Shift change completed. Crane barge has moved back up to location 765.
1140	Crane barge moved forward.
1350	Switched out shuttle barges. Dredging stopped. MCM shift change.
1419	Switched completed. Shift change completed. Crane barge has moved up to location 810.
1425	Headed out in the zodiac with EnviroCon to collect turbidity readings.
1427	Calibrated turbidity meter.
1429	Collected a turbidity reading ~ 200' outside the curtain and directly north of the dredging barge. GPS Mark 44 (N46°29.859', W084°23.377') Turbidity = 1.09 NTU
1433	Collected a turbidity reading ~ 100' outside the curtain and directly north of the dredging barge. GPS Mark 45 (N46°29.824', W084°23.360') Turbidity = 0.13 NTU
1435	Could not reach the western side of the curtain to collect a sample do to wind and waves.
1436	Collected a turbidity reading ~100' to the north of the east side of the curtain. GPS Mark 46 (N46°29.855', W084°23.255') Turbidity = 0.64 NTU
1438	Headed back inside of the curtain to collect turbidity readings.
1441	Collected a turbidity reading ~400' to the north of the crane dredging barge inside the curtain. GPS Mark 47 (N46°29.780', W084°23.333') Turbidity = 4.43 NTU
1444	Collected a turbidity reading ~200' to the north of the crane dredging barge inside the curtain. GPS Mark 48 (N46°29.701', W084°23.273') Turbidity = 3.88 NTU
1449	Finished collecting turbidity readings. Return to crane barge.
1500	EnviroCon shift change.
1600	K. Kidder arrived at the bay.
1605	Departed the bay for the site yard. Shift completed.

9. Prepared by (Name and Position) Jody Dillon	

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/19/07	3. Time Prepared 0700 - 1500
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 1st

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
0650	Arrived at the bay. Pumped water out of the boat and headed out to the barge to pick up D. Russel.
0700	Picked up D. Russel and dropped her off on shore. D. Russel departed the bay.
0720	Crane barge moved a couple of feet to location 853.
0810	MCM shift change. A few of their crew members missed the boat coming to the bay. Dredging stopped. We will have to wait until the other crew members arrive before we can continue. MCM is going to perform some general maintenance while we are down.
0815	Poor communication between the MCM night crew and day crew. Also crane operator and deck hand missed the shuttle boat out to the site. Apparently their power went out last night so their alarm clocks did not go off.
0950	Switching out shuttle barges.
1027	Switch completed. Dredging started. Total down time 2 hrs 25 minutes.
1150	Switching out shuttle barges. Dredging stopped.
1215	Switch completed. Dredging resumed.
1218	Worked on temporary dock with EnviroCon. Water levels high 600.8.
1245	Returned to crane barge.
1311	Crane barge moved forward. New location 880.
1355	Switching out shuttle barges. Dredging stopped.
1440	Switch completed. Dredging resumed. Repositioned crane barge.
1455	EnviroCon Shift change.
1510	Took the zodiac to the dock. K. Kidder arrived at the bay.
1520	Fixed dock.
1525	Departed the bay for the site yard. Shift completed.

9. Prepared by (Name and Position) Jody Dillon

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/20/07	3. Time Prepared 0700 - 1500
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 1st

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
0655	Arrived at the bay. Picked up D. Russel on the barge and dropped her off on shore.
0705	D. Russel departed the bay.
0720	Location within the former dredged area is 210.
0745	MCM Shift change. Dredging stopped
0800	Shift change completed. Dredging resumed.
0815	Went and checked-out working curtain that was delivered with Bob from MCM and Norm from EnviroCon. Curtain is ready to be installed whenever a decision is made on when and where it will be implemented.
0835	Returned to crane barge and met with MCM Wayne and went over how the curtain was set up last year so that Weston, EnviroCon and MCM all understand how it will be used and set-up.
0920	EnviroCon Skip arrived at the barge. He informed us that we will be dredging to elevation 596 not 596.5 to ensure that there is enough clearance for the crane barge and shuttle barges.
1029	Switched out shuttle barges. Dredging stopped.
1058	Switch completed. Dredging resumed.
1100	Project representatives arrived at the bay. Shuttle several groups back and forth from the shore out to the crane barge to oversee current operations.
1207	Project representatives departed the bay.
1308	Crane barge repositioning. Crane barge and shuttle barge are stuck. Dredging stopped
1342	Crane barge unstuck. Switched out shuttle barges. Shuttle barge stuck on sand bar. MCM is going to mark the access route for the shuttle barges on both sides of the channel.
1405	Switch completed. Dredging resumed.
1430	Headed out into the river to collect turbidity readings.
1438	Calibrated turbidity meter.
1439	Collected a turbidity reading ~ 100' outside the curtain and directly north of the dredging barge. GPS Mark 49 (N46°29.820', W084°23.364') Turbidity = 0.70 NTU
1441	Collected a turbidity reading ~ 200' outside the curtain and directly north of the dredging barge. GPS Mark 50 (N46°29.852', W084°23.385') Turbidity = 0.83 NTU
1443	Collected a turbidity reading ~100' to the north of the west side of the curtain. GPS Mark 51 (N46°29.794', W084°23.428') Turbidity = 0.76 NTU
1446	Collected a turbidity reading ~100' to the north of the east side of the curtain. GPS Mark 52 (N46°29.832', W084°23.276') Turbidity = 0.85 NTU
1448	Headed back inside of the curtain to collect turbidity readings.
1449	Collected a turbidity reading ~200' to the north of the crane dredging barge inside the curtain. GPS Mark 53 (N46°29.745', W084°23.306') Turbidity = 8.20 NTU
1452	Collected a turbidity reading ~100' to the north of the crane dredging barge inside the curtain. GPS Mark 54 (N46°29.656', W084°23.247') Turbidity = 17.60 NTU
1455	Returned to crane barge.

1500	EnviroCon shift change.
1515	Crane barge is repositioning - stuck on bottom. Dredging stopped.
1528	Crane barge repositioned - unstuck. Dredging resumed.

9. Prepared by (Name and Position)

Jody Dillon

Activity Log	
Time	**Major Events**
1540	Crane barge repositioning.
1545	Crane barge repositioned.
1600	Dredging stopped. Had to unstrap crane and reposition it on its platform.
1610	K. Kidder arrived at the bay. Crane is still repositioning.
1620	Departed the bay. Shift completed.

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name	2. Date Prepared	3. Time Prepared
	Cannelton	06/21/07	0700 - 1500
4. Unit Name: USEPA/Weston/Sault St Marie	5. Unit Leader (Name and Position)		6. Operational Period
Project Oversight	Chris Lantinga		1st

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
0650	Arrived at the bay. Met D. Russell at the shoreline. Boat was sitting the rocks.
0700	D. Russell departed the bay.
0705	Arrived at the crane barge. Computer on the crane is down. Dredging has been down since 0655.
0726	Computer in the crane has been fixed. Dredging resumed.
0745	Went over to dredge 56 and check out the curtain.
0845	Dredging stopped. Crane barge tried to reposition - except one of its spuds cables got off track so MCM is unable to move the spud up or down.
1150	MCM finally got the crane barge spud fixed. Dredging resumed.
1155	Switching out shuttle barges. Dredging stopped.
1200	Went over to dredge 56 to check on curtain. There are 3-4 sections that need to be repaired, but due to high winds and waves fixing the curtain will have to wait.
1227	Shuttle barge switch completed. Dredging resumed.
1400	C. Lantinga arrived at the bay to head out to the crane barge. Unable to reach crane barge due to high winds and broken outboard. Outboard was taken to get fixed by C. Lantinga.
1449	Switching out shuttle barges. Dredging stopped.
1516	Shuttle barge switch completed. Dredging resumed.
1525	Moved crane barge forward.
1645	K. Kidder arrived at the bay.
1700	Brought K. Kidder out to the barge.
1730	A. Dickinson arrived at the bay with the fixed outboard. Put outboard back on raft.
1745	Used raft to head out to the crane barge to drop off a map to K. Kidder and to look at clean and contaminated soil.
1800	Departed the bay to drop C. Lantinga off at the yard. Shift completed.

9. Prepared by (Name and Position)

Jody Dillon

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 06/22/07	3. Time Prepared 0700 - 1500
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 1st

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
0630	Arrived at the yard trailer to pick up example samples and water level logger for D. Russell.
0635	Departed the yard for the bay.
0645	Arrived at the bay and fixed dock while waiting for D. Russell to come with the boat.
0720	D. Russell arrived with the boat and headed to collect water levels. Pull cord for the outboard motor is not recoiling and needs to be fixed again.
0740	Finished fixing dock and headed out to the crane barge.
0745	MCM shift change. Dredging stopped.
0750	Went over dredge depths with MCM Bob and Crane Operator Danny. We are just at the eastern edge of Dredge Lane 1. Approximate dredge depths in this area is 4 feet which will give us plenty of draft for the barges.
0755	Dredging started.
0823	Switching out shuttle barges. Dredging stopped. MCM is also going to switch to a larger clam shell bucket for the crane - material has become softer and faster progress will be made with a larger bucket.
0918	Shuttle barges have been switched. The large clam shell bucket is being attached to the crane.
0920	Large shuttle scow is being switched out and taken back to the site yard for off loading
0945	Large shuttle scow switch completed. Curtain still needs to be put back in place.
1020	Shuttle barge hooked up next to crane barge. Dredging resumed.
1147	Switched out shuttle barges. Dredging stopped.
1240	Switch completed. Adjusted working curtain. Dredging resumed.
1340	Switched out shuttle barges. Dredging stopped.
1416	Switch completed. Adjusted working curtain. Dredging resumed.
1430	Departed the crane barge for the dock.
1445	Departed the bay. Shift completed.

9. Prepared by (Name and Position)
Jody Dillon

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 6.25.07 - 6.26.07	3. Time Prepared 1100 - 0700
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 3rd Shift

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
2245	Arrived at the bay and met D. Russell at the dock. Went over current operations and D. Russell departed the bay.
2300	Arrived at the crane barge. MCM and EnviroCon were having a meeting to discuss dredge depths. We will be dredging to at least 596' and will dredge deeper if necessary to get to clean sand.
2315	MCM shift change. Dredging stopped.
2345	Shift change completed. Switching out shuttle barges.
2426	Switch completed. Resumed dredging.
0130	Dredged up several large rocks from the far right side of the lane. MCM is fixing up the working curtain.
0235	Switching out shuttle barges. Dredging stopped.
0305	Switch completed. Dredging resumed.
0351	Switching out shuttle barges do to low water level. Dredging stopped.
0427	Switch completed. Dredging resumed.
0445	MCM is adjusting working curtain.
0542	Switching out shuttle barges. Dredging stopped.
1616	Switch completed. Dredging resumed.
1650	Departed the crane barge to collect water level readings.
0657	Before water level reading 38 5/8''.
0700	After water level reading 38 3/8''.
0705	K. Kidder arrived at the bay and shuttle me out to the crane barge to get the turbidity meter.
0715	Departed the bay for the yard.
0725	Arrived at the yard and dropped off the turbidity meter and water level recorder.
0735	Departed the yard. Shift completed.

9. Prepared by (Name and Position)
Jody Dillon

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 6.26.07 - 6.27.07	3. Time Prepared 1100 - 0700
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 3rd Shift

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
2245	Arrived at the bay. Met D. Russell at the dock and went over current operations. D. Russell departed the bay.
2255	Caught a shuttle ride out to the crane barge with EnviroCon. MCM is currently switching out shuttle barges. Starting location at the beginning of shift is 170.
2325	Shuttle barges switched. MCM shift change.
2401	Shift change completed. Dredging resumed.
2405	Computer in the crane has stopped working. Dredging will continue without the computer.
0115	Switching out shuttle barges. Dredging stopped.
0150	Switch completed. Dredging resumed.
0240	Switching out shuttle barges. Dredging stopped.
0328	Switch completed. Dredging resumed.
0345	Lighting observed far to the north. We will keep watching the storm to ensure that lighting does not come close to our operation. Thunder storms are suppose to pass through the area in the early morning.
0400	Switching out shuttle barges. Dredging stopped.
0430	Switch completed. Dredging resumed.
0534	Switching out shuttle barges. Dredging stopped.
0610	Switch completed. Dredging resumed.
0645	Departed the crane barge to collect water level data.
0657	Initial water level = 39 ¾''
0705	Final water level = 39 11/16''
0710	K. Kidder arrived at the bay. Went over current operations.
0725	K. Kidder headed out to the crane barge.
0730	Departed the bay for the site yard.

9. Prepared by (Name and Position)
Jody Dillon

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 6.27.07 - 6.28.07	3. Time Prepared 1100 - 0700
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 3rd Shift

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
2345	Arrived at the bay. Met D. Russell at the dock and went over current operations. D. Russell departed the bay.
2350	Arrived at the crane barge. MCM is finishing their shift change. Current location is 230 in dredge lane one.
2355	Switching out shuttle barges.
2433	Switch completed. Dredging started.
2445	*GPS coordinates: N 634261.29 E 26904037.11
0120	Switching out shuttle barges. Dredging stopped.
0156	Switch completed. Dredging resumed.
0330	Stopped Dredging to fix working curtain.
0346	Finished adjusting working curtain. Switching out shuttle barges.
0425	Switch completed. Dredging resumed.
0520	Switching out shuttle barges. Dredging stopped.
0557	Switch completed. Dredging resumed.
0615	Location 243 dredge lane one.
0620	EnviroCon Skip arrived at the crane barge.
0645	Departed the crane barge to go and collect water level readings.
0656	Initial water level reading = 31"
0701	Final water level reading = 29 ¾"
0710	K. Kidder arrived at the bay. Went over current operations.
0715	K. Kidder headed out to the crane barge.
0720	Departed the bay for the yard. Shift completed.

9. Prepared by (Name and Position)
Jody Dillon

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

UNIT LOG	1. Incident Name Cannelton	2. Date Prepared 6.28.07 - 6.29.07	3. Time Prepared 1100 - 0400
4. Unit Name: USEPA/Weston/Sault St Marie Project Oversight	5. Unit Leader (Name and Position) Chris Lantinga		6. Operational Period 3rd Shift

7. Personnel Roster Assigned

Name	ICS Position	Home Base
Jody Dillon	Field Tech.	Sault St Marie, MI

8. Activity Log

Time	Major Events
2245	Arrived at the bay. Met D. Russell at the dock and went over current operations. D. Russell departed the bay.
2250	Arrived at the crane barge. Current location is 300 in dredge lane one.
2256	MCM is just finishing switching out shuttle barges. Dredging resumed.
2358	Switching out shuttle barges. Dredging stopped.
2400	GPS coordinates: N 634269.38 E 26903974.17
2455	Switch completed. Dredging resumed.
0154	Switching out shuttle barges. Dredging stopped.
0255	Switch completed. Dredging resumed.
0315	Crane barge repositioned.
0350	Departed the crane barge.
0400	Departed the bay for the yard.

9. Prepared by (Name and Position)
Jody Dillon

Activity Log

Time	Major Events

9. Prepared by (Name and Position)

Jody Dillon

Cannelton Industries Site - Sault Ste. Marie, MI

Weather: Rain, Scattered showers, High of 63°F.

0830 Keith K. leaves Okemos, MI office for Sault Ste. Marie, MI

1330 Keith K. (WESTON) onsite, MCM Yard to check in with WESTON personnel.

1400 Health and Safety Meeting/Briefing, Scheduling, Site walk-through, etc.

1500 offsite to get rental cars for project

1600 back onsite at MCM Yard. Chris Lantinga (WESTON) onsite to give project responsibilities and assignments.

1800 Set up gear for field work, setting up supplies in site trailer.

1815 offsite

Keith Kidder

6/5/07

Cannelton Industries Site, Sault Ste. Marie, MI

Weather: Overcast/Partly Cloudy, High of 58°F, very windy

0910 Keith K. (WESTON) onsite at the MCM Yard. Speak to Annette Dickinson (WESTON) at site trailer about schedule and todays activities. Based on weather conditions (very windy) MCM plans to mobilize the crane / spud barge to Tannery Bay along with silt curtain, may start to drive I-beams later today for silt curtain

1020 MCM mobilizing spud barge and crane down to Tannery Bay. Keith K. collected 2 photo's. Photo 1 (579) looking North out to Tannery Bay at dredge 56. Photo 2 (580) looking Northeast to the spud barge and crane.

1040 Heading back to site trailer.

1050 Back at site trailer, Annette D. and Keith K. heading to Tannery Bay to get water level and barometric pressure transducer data from transducers in stilling well. Also collected photo's of crane and spud barge and stilling well and Enviro Con's staff gauge.

1220 Lunch.

1300 Keith K. checking local marina's for pricing on aluminum jon boats and small 5-15 Hp boat motors.

1400 Checked at 2 local boat dealerships. R+R Marina and Sault Boat Works.

1500 Heading back to site trailer to help out with tasks at the site trailer.

~~1610 Heading out to~~

/5/07

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6/5/07 107

Cannelton Industries Site, Sault Ste. Marie, MI

1630 Talk to Dave Schooley (EnviroCon) about crane certs for MCM, he said that MCM still has to provide certs and medical clearance for a few employees. No dredging will ~~occur~~ occur until this is remedied

1700 Jody Dillon (WESTON) and Keith K. head out to Tannery Bay to re-deploy transducers in the stilling well. Measured water level at stilling well: 34 1/4"

1710 Placed elastic band on stilling well to mark water level.

1720 Heading back to MCM Yard.

1800 Spoke with Chris L. (WESTON) about schedule and tasks.

1815. offsite

Keith Kidder
6/5/07

6/6/07

Cornelton Industries Site, Sault Ste. Marie, MI
Weather: Sunny, High of 62°F, Slight South wind.

0915 Keith K. (WESTON) onsite MCM Yard to check in with Staff.

1000 Todays tasks include:
- Continuous water levels at Stilling well for atleast 1 hour every 5min.
- GPS in USACE point (see map)
- GPS in all I-beam locations
- water levels off from I-beams, (water surface to bottom ie top of sediment)
- Turbidity readings (Kemmerer + Turbidity meter)
- Help Enviro con with boat dock at Tannery Bay.
- Measure drafts on all dredge barges, shuttles, scows, etc.
- Phelps Dodge property Survey
- Purchase 2 marine radios

1030 Located at Site trailer at Tannery Bay with Jody Dillon (WESTON) and Annette Dickinson (WESTON) to Start with water level collection at the Stilling well.

1110 Recording all water level data on seperate sheets, (see Annette D. logbook for data).

1120 Pulled transducer's so Annette D. could download water level data

1125 Trouble with water level data on transducer noticed cable on water level was too long.

1140 Keith K. and Jody D. Shortened the cable so transducer would not hit the bottom of the well. New length of cable recorded in Annette D. logbook.

1230 Started new water level test. The measurements were recorded on seperate sheets

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CM Yard

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6/6/07 109

Cannelton Industries Site Sault Ste. Marie, MI

1330 Pulled transducers of Stilling well
Annette D. Starting to download data.
Annette D. said the data looks good.

1355 Lunch

1440 Keith K. and Jody D. heading out to GPS in USACE point

1520 Having trouble locating the USACE survey disk

1545 Located the USACE benchmark, its located on the southern edge of cement breakwall
Coordinates are as follows
Northing: 46° 29. 650' (waypt. 487)
Westing: 084° 23. 181'

1600 Heading out to inspect silt curtain (wading to silt curtain, no boats available for use)
MCM working from shallow area to the west and working toward the east. (photo's 2+3)

1605 MCM utilized 40 lb. anchors to ~~weight~~ weigh down silt curtain (photo 4)

1615 MCM lifting silt curtain with Link Belt crane to lay out silt curtain (photo's 5-7)

1640 No turbidity readings collected today because no boats were available for use.

1645 Heading to area marina's to look for marine radios

1700 Checked at R+R Marine, MCM Marine and Sault Boat Works. Will check at Walmart/Kmart.

1715 Located at site trailer at MCM Yard

1820 offsite

Keith Kidder

6/6/07

6/7/07

Cannelton Industries Site Sault Ste. Marie, MI

weather: Partly Cloudy, High of 76°F, High Winds

0925 Keith K. (WESTON) onsite MCM Yard Site trailer.

0930 Due to high winds (gusts over 50 mph) MCM plans to only install the rest of the I-beams and the remainder of the silt curtain. Silt curtain will not be dropped until winds slow.

0935 Tasks for today include
- measure drafts on all ~~barge~~ barges, scows, shuttles, etc.
- measure distance from water level to top of the sediment at each I-beam location, and record the time at each.
- Turbidity readings (if possible)

1000 Talk to Skip and Dave Schooley (Enviro Con) about boat dock at Tannery Bay, boat access, and draft measurements. Enviro con is still trying to get access at Reiss Coal Docks adjacent to Tannery Bay to the east. If that does not happen then Enviro con will have an access dredge path ~~put~~ put in to the original dock location on the South side of Tannery Bay. The dock will also have to be rebuilt as it is in major disrepair. Enviro con continues to work on fixing the boat that will be used by Enviro con and WESTON. No boat access yet. Draft measurements will be recorded today out on the dredge barge and all other associated vessels. Draft measurements on ~~the~~ Dredge #5le will not be recorded as it will be staged in the St. Marys River at all times so water depth will not be an issue.

Ca

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1130

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1245

Cammelton Industries Site, Sault Ste. Marie, MI

1100 Heading out to Tannery Bay to meet Norm and Brett (Enviroscan) to perform draft measurements. Keith K. will walk the exposed sediment with waders to near the area of the silt curtain and then get picked up by Enviroscan/MCM boat.

1120 Keith K. on the dredge barge, meet Brett and Norm.

1130 Draft Measurements:

Red Poseidon Shuttle #1:

Depth to Water From top of platform: 45 3/4"

Distance between Top of Platform to bottom of Shuttle: 59 3/4"

Draft Thickness: 14"

- Shuttle Mostly empty, contained 5 rolls of silt curtain large generator and personnel. Measurement recorded from lowest sitting part of shuttle.

Dredge Barge (with Link Belt Crane)

Depth to Water From top of level platform: 31"

Distance from Top of Platform to bottom of vessel: 72"

Drift Thickness: 41"

- measurement recorded from the corner next to the Link Belt Crane (heaviest part of barge). Dredge barge has Link Belt Crane, Large Generator, Small site trailer, 2- large clam shell buckets,

1230 off dredge barge and back at Tannery Bay site trailer, heading back to MCM Yard.

1235 Meet Chris Cantinga (WESTON) at site trailer. Chris wants to look at Tannery Bay and discuss dock access issues.

1245 Chris L. and Keith K. talk to Doug McCoy and Bob Chartrand (MCM) about dock issues and the draft measurements. Bob said that the draft on the dredge barge will be ≈ 18" when water is pumped accordingly, Keith K.

6/7/07

Cuneltons Industries Site, Sault Ste. Marie, MI
measured 41" earlier today. Bob thought that there will be no problems with the draft depths. The dock on ~~the~~ Tannery Bay will need to have access dredge path. Will discuss more with MCM and Envirocon.

1250 Lunch.

1320 Heading back to MCM Yard.

1350 Heading out to purchase 2-marine ~~radios~~ radios.

1440 Purchased 2 marine radios for use on the dredge barge

1500 Set up marine radios for use in the Field.

1600 Heading out to Tannery Bay with Chris L. to check on silt curtain progress

1630 All I-beams have been installed, last few feet of silt curtain is being installed

1730 Collected photo's 1-8, silt curtain installation, I-beam installation,

1830 Continue to watch MCM Finish tying up silt curtain and barge vessels.

1845 MCM Finishing up silt curtain installation

1850 Keith K. offsite

Keith Kidder
6/7/07

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6/8/07

Cannelton Industries Site Sault Ste. Marie, MI

Weather: Partly Cloudy, Chance of Rain, High of 60°F, Windy

0915 Keith K. (WESTON) onsite MCM Yard Site trailer

0930 Starting expense report and time sheet submittal.

1030 Health and Safety Meeting with Enviro Con Dave Schooley (Enviro con Health and Safety Officer) and Skip (Enviro con) lead the discussion.

1130 Assist with ~~site trailer~~ KK paper work and other tasks

1245 Lunch

1320 Located at Tannery Bay to collect water level data from transducers in the stilling well.

1430 Measurements collected include
Depth to Water from TOC: 30¼" (Initial)
Depth to Water from TOC: 31½" (After)
Transducer data was downloaded at 1405.

1435 Headed back to site trailer to download data.

1530 Due to high winds, MCM Marine will not be dredging tonight. Dredge barge and supporting vessel inspections will be completed tomorrow. also still need to GPS in I-beams, collect turbidity readings, collect water levels at I-beams, and inspect the access dock.

1630 Offsite

Keith Kidder
6/8/07

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Cannelton Industries Site Sault Ste. Marie, MI

weather: Sunny, High of 77°F, slight wind.

0755 Keith K. (WESTON) onsite, MCM Yard Site trailer

0800 MCM mobilizing to Tannery Bay with equipment. MCM plans to get fully set up for access dredging, which should start early today. Silt curtain will need to be dropped before start of access dredging.

0805 Todays tasks include: GPS in I-beam locations and grab water levels at I-beams and record time

- Stilling well water levels from transducers
- Dredge 56, Dredge Barge, and Shuttle inspections
- Turbidity Readings.
- Access Dredging Oversight and Photo Documentation.

0930 Located at Tannery Bay to start on tasks list. Starting with water level collection at the stilling well. Initial Water Level: 41½" btoc
Post (After) Water Level: 42" btoc
- transducers pulled at ≈ 0935. redeployed at 0940. Data transfered with no problems.

0955 MCM Marine has dredge barge with crane inside silt curtain to set up for access dredging. Silt curtain open from 0940 to

1000 Keith K. on Dredge 56 for pre inspection to make sure equipment is in working order.

1015 Dredge 56 Pre-Inspection Comments:

- Cutting torch and associated oxygen and acetylene tanks are tied by a rope only. (photo 1)
- a significant amount of clutter of unrelated equipment was observed (general housekeeping issue) also slip, trip, and fall hazard.

6/9/07

Camelton Industries Site Sault Ste. Marie, MI

- Manitowoc crane, cables seem to be in good condition. (photo 2)
- no oil or hydraulic fluid leaks noted.
- may need more illumination. (Follow-up later)
- general cleanliness could be better. (photo 3)

Dredge Barge Comments: (photo 4) Dredge barge + shuttle

- most slip, trip, fall hazards are marked i.e. yellow paint on all metal edges of containment barrier on platform, support post for shuttle also painted yellow for visibility
- Link Belt Crane seems to be in good condition, cables seem to be in good condition. (photo 6)
- compressed oxygen tank for cutting torch is hand tied by a rope (photo 5) + (photo 7) no leaks observed
- clam shell dredge bucket seems to be in good condition all cables look to be in good condition. (photo 8)
- 2 plastic gas cans are openly stored on the deck platform underneath the site trailer (photo 10). these need to be move to a proper storage cabinent immediately.
- Life ring needs to be placed in a more accessible location, life ring is on the ground under the trailer. (photo 11)
- Clutter of equipment around the generator, needs to be picked up and secured (photos 12,13)
- illumination may be an issue will follow up later.

1135 Completed pre-inspection activities. Heading offsite with Chris L. (WESTON) and Jody Dillon (WESTON)

1200 offsite until shift change @ 1700

1700 Keith K onsite Tannery Bay. MCM has started

6/9/07

Cannelton Industries Site Sault Ste. Marie, MI
dredging efforts (access dredging along east side of Tannery Bay at the rock and cement retaining wall. Diane R. (WESTON) said MCM started dredging at ≈ 1410.

1705 Diane R. offsite.

1710 Keith K dredging oversight.

1720 Collected photo's 14-17 showing Link-Belt Crane dredging sediments and dumping in shuttle.

1745 Heading out in MCM boat to GPS in I-beam locations:

Waypt 489 I-beam #1 (farthest west) N: 46°29.714'
W: 84°23.425'

490 I-beam #2 (next one going east) N: 46°29.744'
W: 84°23.403'

491 I-beam #3 (next one going east) N: 46°29.769'
W: 84°23.380'

492 I-beam #4 (rock pile point at retaining wall farthest east)
N: 46°29.793'
W: 84°23.294'

1800 Wind has picked up considerably, will not be able to collect Turbidity readings in the river today, unless wind speed decreases, too rough out on the river for the small flat bottom boat

1815 MCM continues to access dredge along the eastern part of Tannery Bay just west of the stone and cement breakwall.

1820 Photo's 18-21 show silt curtain, high winds have caused it to start to bow out.
Photo 22 shows dredge spoils on shuttle.

1830 Changing out shuttle, shuttle full.

1841 New empty shuttle tied up next to dredge barge continue dredging. Dredge 56 starting to unload

6/9/07

Cannelton Industries Site Sault Ste. Marie, MI

other Shuttle into large dump scow. (photos 23-24) 2230

1915 MCM continues access dredging. Photo 25 shows Enviracon measuring drafts on the dredge barge. 2300

1940 Norm (Enviracon) onsite for switchout of other Enviracon man.

2000 Shift change (MCM) Keith K. Start collecting turbidity readings. Two readings collected inside the working curtain at 100' + 200' intervals and 6 readings collected outside the silt curtain at 100' + 200' intervals

Mark	Northing	Westing	NTU
493	46°29.748'	84°23.323	3.42
~~494~~ 001	46°29.769'	84°23.334	3.48
002	46°29.710'	84°23.428	1.01
003	46°29.755	84°23.414	0.06
004	46°29.749	84°23.361	0.94
005	46°29.816	84°23.345	0.81
006	46°29.795	84°23.390	1.49
007	46°29.744	84°23.452	1.43

2035 Completed turbidity readings.

2040 MCM continues access dredging.

2100 Skip (Enviracon) onsite

2115 Chris L. (WESTON) onsite

2120 MCM change out Shuttle

2135 Continue dredging, Dredge 5 is emptying dredge spoils onto dump scow.

2150 Noticed MCM men in between track and cab of the crane, which is a major pinch point.

2155 MCM has a maintenance issue with the Link Belt crane

2200 Link Belt back up and running

6/9/07

Sault Ste. Marie, MI
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1°23.428	1.01
1°23.414	0.06
4°23.361	0.94
84°23.345	0.81
84°23.390	1.49
84°23.452	1.43

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Cannelton Industries Site Sault Ste. Marie, MI

2230 MCM continue ~~the~~ access dredging.

2300 Jody Dillon (WESTON) onsite for WESTON shift change. MCM continue access dredging. Keith K. offsite

Keith Kidder
6/9/07

6/10/07

Cannelton Industries Site Sault Ste. Marie, MI
Weather: Sunny, High of 76°F, Slight wind.

1145 Keith K. (WESTON) onsite to get water levels at Stilling well at Tannery Bay.

1155 Initial Water Level: 39⅝" btoc

1158 Transducers pulled to download water level data.

1203 Past (After) Water Level: 39⅞" btoc

1220 Spoke to Diane R. (WESTON) about dredging progress. She said that there was a couple of mechanical issues (alternator on Link Belt Crane)

1225 Keith K. to MCM Yard to turn in paper work.

1310 Keith K. offsite until shift change at 1500

1570 Keith R. (WESTON) at Tannery Bay. WESTON Shift Change Diane R. offsite. Diane R. said that there were a total of 3 shuttle change outs on her shift.

1530 MCM continues to access dredge on east side of Tannery Bay next to the stone and cement breakwall.

1539 Crane Stopped dredging (Link Belt) GPS issue MCM working on issue. Photo 34 shows water running off shuttle.

1551 Link Belt Back to work, but GPS not working properly, ~~barge~~ shuttle is almost full so Bob Everitt (MCM) instructed crane operator to put last few buckets into shuttle to fill the shuttle before the repair is made to the GPS.

1557 MCM continues to access dredge.

1615 Change out shuttle

1630 Back to dredging, GPS repaired

1640 Keith K. and Chris L. (WESTON) perform turbidity readings at Tannery Bay

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6/10/07

Cannelton Industries Site Sault Ste. Marie, MI

Turbidity Readings → Kemmerer Sampler Used

Mark	Northing	Westing	NTU
008	46° 29.708	84° 23.439	0.89
009	46° 29.755	84° 23.48	0.57
010	46° 29.788	84° 23.361	0.11
011	46° 29.807	84° 23.292	0.31
012	46° 29.812	84° 23.383	0.13
013	46° 29.774	84° 23.439	0.63
014	46° 29.782	84° 23.311	1.36
015	46° 29.732	84° 23.359	1.55

- a total of six readings were collected at 100' + 200' intervals outside the silt curtain the St. Marys River. Two readings were collected inside the silt curtain 100' + 200' away from active dredging location.

1720 MCM continue access dredging along east side of Tannery Bay next to the stone and cement breakwall. Silt curtain in good working condition.

1730 MCM dredge barge down, changing out shuttle

1804 Shuttle now tied up next to dredge barge, continue access dredging.

1830 MCM continues access dredging

1845 MCM continues access dredging

1915 MCM changing out shuttle (6th full shuttle for day 1st MCM shift)

1925 New shuttle tied up to dredge barge, moving dredge barge forward, water elevation at 600.20'

1935 Start dredging, filling 7th shuttle of the day located near the 1+00 stake.

1950 MCM continue dredging along access dredge path.

2000 MCM shift change, dredging stopped.

2014 MCM back to access dredging

6/10/07

Gaulton Industries Site Sault Ste. Marie, MI

2050 MCM continues to dredge sediments at the access path

2100 MCM changing out dredge shuttle. (photo 35) Stop dredging for changeout.

2115 Shuttle tied up and ready for sediments on dredge barge.

2155 MCM continue to dredge along access path

2215 MCM continue dredging.

2240 MCM temporarily stopped dredging to put up additional lighting on the front left corner of the dredge barge so the crane operator can see better.

2250 Light has been installed, back to dredging.

2255 Jody D. (WESTON) onsite, for shift change.

2300 Keith K. offsite

Keith Kidder
6/10/07

6/10/07
Marie, MI
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- shift change.

6/11/07 - 6/12/07

Cannelton Industries Site Sault Ste. Marie, MI

~~KK~~ Weather: Fair, calm, Low of 50°F overnight

2255 Keith K. (WESTON) at Tannery Bay for shift change, Jody Dillon (WESTON) offsite at 2300, Norm (Envirocom) onsite for shift

2300 MCM access dredging, located at station 99. (This number is questionable since dredge barge moved forward ≈ 10'-15' at start of WESTON night shift). Will check into the location later.

2340 Shuttle almost full, will need to be changed out soon.

005 Shuttle full, MCM changing out shuttles

028 Empty shuttle tied up to dredge barge resume dredging

030 Spoke with Norm and MCM, located at Station 112.

0100 MCM continue access dredging

0120 MCM continue access dredging

0140 MCM changing out shuttle, its loaded a little light, MCM was concerned that if the shuttle was loaded to heavy that they would not be able to move it.

0204 MCM has empty shuttle tied up to dredge barge, continue access dredging. Dredge 56 emptying full shuttles using Manitwoc Crane with clam shell bucket. Unloading sediments onto large dump scow.

0340 Shuttle full, MCM changing out shuttles, dredging stopped.

0408 Empty shuttle tied up to dredge barge, getting ready to move forward. Making sure depths of dredging are good.

0451 Moving dredge barge forward.

0515 MCM continue dredging, located at station 118

0530 MCM continue access dredging, MCM wants

6/12/07

Cannelton Industries Site Sault Ste. Marie, MI
to switch to a round mouth bucket
to attempt to speed up the dredging progress
0537 Moved forward, still located at Station 118.
MCM continue access dredging.
0600 MCM changing out Shuttle, Shuttle Full
0620 MCM have empty Shuttle tied up to
dredge barge. MCM decided to put on the
round mouth bucket
0625 Start putting on round mouth bucket
0650 Round mouth bucket attached, resume access
dredging
0652. Cable problem, MCM working on cable issue,
round mouth bucket is smaller than the other
clam shell bucket that was used previously.
0705 Cable problem fixed, resume access dredging.
0720 MCM continue access dredging
0730 Diane R. (WESTON) onsite for WESTON Shift
change. Keith K. offsite
0750 Keith K. at MCM Yard to turn in
paper work

Keith Kidder
6/12/07

6/12/07

Ste. Marie, MI
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ESTON Shift

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6/12/07 - 6/13/07

Cannelton Industries Site Sault Ste. Marie, MI
Weather: Calm, Low of 52°F Overnight,

2255 Keith K. (WESTON) on site Tannery Bay for shift change with Jody Dillon (WESTON)

2305 Jody D. offsite, Norm (Envirocon) indicated that the dredge barge was at approximately STA 198.

2310 MCM trying to center up the dredge barge and shuttle before resuming access dredging. Ken (Envirocon) also on the dredge barge.

2315 Dredge barge lined up, resume dredging. located at STA ~~204~~ 198. MCM filling shuttle #1 (partially filled at start of shift)

2340 MCM continue access dredging

026 MCM changing out shuttle #1, approximately 40 cu. yds. in shuttle. Shuttle to dredge site for unloading.

045 Shuttle #2 tied up to dredge barge, resume dredging

Shuttle #2

Bucket #	Time (elapsed) min	Bucket #	Time (elapsed) min
1	0	16	1.39
2	1.46	17	1.30
3	1.55	18	1.30
4	1.32	19	1.44
5	1.59	20	1.56
6	1.48	21	1.45
7	1.38	22	1.50
8	1.20	23	1.26
9	1.28	24	1.35
10	1.34	25	1.31
11	1.52	26	1.39
12	1.54	27	1.54
13	1.43	28	1.26
14	2.36	29	1.54
15	1.33	30	1.46

6/13/07

Cannelton Industries Site Sault Ste. Marie, MI

	Bucket #	Elapsed Time (min)	Bucket #	Elapsed Time (min)
	31	1.55	41	1.55
	32	1.38	42	1.22
moved barge forward 0155 →	33	0	43	1.19
	34	1.40	44	1.27
	35	1.30	45	1.49
	36	1.51	46	1.35
	37	1.44	47	1.18
	38	1.32	48	1.36
	39	1.18	49	1.38
	40	1.39	50	1.21
	51	1.25		
	52	1.22		
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	60			

0243 MEM loaded Shuttle #2 with 52 total buckets
Switching out shuttles.

0255 MEM having difficulty moving full shuttle off from dredge barge. Water level at ≈ 599.7' AMSL

0330 MEM tied up with empty shuttle (Shuttle #1) with the dredge barge, resume dredging

Shuttle #1

Bucket #	Elapsed Time (min)	Bucket #	Elapsed Time (min)
1	0	5	1.26
2	1.30	6	1.51
3	1.03	7	1.28
4	1.16	8	1.19

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6/13/07

4 Ste. Marie, MI

et #	Elapsed Time (min)
	1:55
	1:22
	1:19
	1:27
	1:49
	1:35
	1:18
	1:36
	1:38
	1:21

h 52 total buckets

Full shuttle off from
599.7' AMSL
uttle (Shuttle #1)
dredging

ucket #	Elapsed Time (min)
5	1.26
6	1.51
7	1.28
8	1.19

6/13/07

Cannelton Industries Site Sault Ste. Marie, MI

	Bucket #	Elapsed Time	Bucket #	Elapsed Time
	9	1:44	41	
	10	1:33	42	
	11	1:18	43	
	12	1:05	44	
0400	13	moved barge forward 17:01	45	
	14	1:43	46	
	15	1:18	47	
	16	1:15	48	
	17	1:38	49	
	18	1:23	50	
	19	1:31		
	20	1:37		
	21	1:27		
	22	1:16		
	23	1:58		
	24	1:27		
	25	1:26		
	26	1:52		
	27	1:29		
	28	1:40		
	29	1:32		
	30	1:18		
	31	1:56		
	32	1:26		
	33	1:15		
	34	1:24		
	35	1:25		
0450	36	1:28		
	37	1:40		
	38			
	39			
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6/13/07

Cannelton Industries Site, Sault Ste. Marie, MI

0450 A total of 37 total buckets were loaded onto Shuttle #1. Switching out Shuttles

0525 Shuttle #2 tied up to dredge barge, resume dredging

0640 MCM have Shuttle #2 filled with sediments. Switching out Shuttles

0705 Shuttle #1 tied up to dredge barge, ~~dre~~ access dredging resumed.

0712 Moving dredge barge forward, moved to STA 235.70. MCM resume dredging.

0730 Diane R. (WESTON) onsite for WESTON shift change.

0735 Keith K. offsite

Keith Kidder
6/13/07

6/13/07-6/14/07

Cannelton Industries Site, Sault Ste. Marie, MI
Weather: Calm, Overnight Low of 53°F, very slight wind.

2305 Keith K. (WESTON) onsite Tannery Bay for Shift change with Jody Dillon (WESTON)

2310 Keith K. at dredge barge, upon coming aboard active dredging was being conducted. Ken McDowell (Envirocon) indicated that the Front of the barge is located at STA 365.

2340 MCM continues access dredging.

2350 MCM moving dredge barge forward.

0001 ~~2400~~ Moved to STA 383.90. Continue access dredging

043 Moving forward to STA 393.

047 Resume access dredging.

0100 MCM Changing out Shuttle #1, Shuttle full

0122 Shuttle #2 tied up, resume dredging

Bucket #	Elapsed Time (min/sec)	Bucket #	Elapsed Time (min/sec)
1	0	18	1:08
2	1:39 min/sec	19	1:47
3	4:14	20	1:38
4	1:32	21	1:14
5	1:33	22	1:07
6	9:00	23	1:07
7	1:18	24	1:09
8	1:20	25	1:07
9	1:18	26	1:09
10	1:08	27	1:22
11	1:45	28	1:31
12	1:12	29	1:24
13	1:09	30	1:29
14	1:35	31	1:20
15	1:19	32	1:34
16	1:34	33	1:17
17	1:02	34	1:17

sweeping with bucket to check depth

move barge forward → STA 401.40

6/14/07

Connelton Industries Site Sault Ste. Marie, MI

	Bucket #	Elapsed Time (min:sec)	
			0531
move barge forward	35	4:58	
STA 413.75	36	1:34	0535
	37	1:19	0600
	38	1:43	0605
	39	1:23	
	40	1:15	0610
	41	1:18	0630
	42	1:39	
	43	1:28	0645
	44	1:16	0650
	45	1:27	
	46	1:45	
	47	1:12	0705
	48	1:46	0715
	49	1:31	
	50	1:14	
	51	1:42	
	52		

0301 Moved Shuttle #2, Shuttle Full, dredging Stopped.

0321 Shuttle #1 tied up to dredge barge

0324 Resume dredging

0335 Moved dredge barge forward to STA 422.61

0343 Resume access dredging

0400 MCM continue to access dredge

0412 Skip Simpson (Environcon) on the dredge barge.

0420 MCM continue to access dredge.

0440 MCM continue access dredging.

0505 MCM changing out Shuttle, Shuttle #1 Full, stop dredging

0530 MCM crane operator indicated that the GPS unit may be reading incorrectly. Wayne from MCM will take a look at it on the start of the next shift.

6/14/07

Marie, MI

Full, dredging

e barge

ard to STA 422.61

e

e dredge barge.

lge.

le #1 Full, stop dredging

at the GPS unit

from MCM will

the next shift

6/14/07

Cannelton Industries Site Sault Ste. Marie, MI

0531 MCM has Shuttle #2 tied up to dredge barge.

0535 MCM continues access dredging, Skip S. offsite

0600 MCM continues access dredging

0605 MCM opening up silt curtain for change out of dump scow.

0610 Located at STA 424

0630 MCM moving forward, Located at STA 426 continue dredging

0645 Keith K. off dredge barge to collect water levels

0650 Water Level Measurements from Stilling Well

Initial : 2 feet, 11½ inches

After : 3 feet, ½ inch

0705 Transducers downloaded Successfully.

0715 Diane R. (WESTON) onsite at Tannery Bay for Shift change. Keith K. offsite

Keith Kidder

6/14/07

6/14/07-6/15/07

Cannelton Industries Site Sault Ste. Marie, MI
weather: Calm, Muggy, Overnight Low of 60°F, no wind.

2300 Keith K. (WESTON) onsite Tannery Bay for Shift change with Jody Dillon (WESTON)
Ken M. (Enviroscon) onsite 0415

2310 Jody D. and Norm (Enviroscon) offsite
Dredge barge located at STA 539 at 0430
Start of shift. MCM actively dredging at 0450
Start of Shift.

2350 MCM continue access dredging.

025 MCM Changing out Shuttle, Shuttle #2 0500
Full, stop dredging.

055 MCM have Shuttle #1 tied up to dredge 0530
barge

058 Resume access dredging. 0550

0130 MCM continue access dredging

0143 MCM backing up dredge barge due to a 555
high spot located on the front edge of
the dredge barge. 0622

0149 Dredge barge backed up ≈ 5 feet to dredge
high spot. High spot is 6" to 1.0' high. 0630
on both sides of barge. Possible mismeasurement
from previous shift on dredge elevation. 0640

0220 MCM continue access dredging. 0700

0300 MCM changing out shuttle #1, Shuttle #1 Full. 0710

0310 Dump scow next to Dredge 56 needed to be
pulled back in closer to Dredge 56. 0715

0320 Dump scow tied up and secure next to Dredge 0720
56. Tying up to empty shuttle Shuttle #2 0725

0333 Shuttle #2 tied up to dredge barge. 0730

0338 MCM resumes access dredging.

0400 MCM continues access dredging 0750

0407 MCM moving dredge barge forward, crane operator

Cannelton Industries Site Sault Ste. Marie, MI

indicated that the area around ~~the~~ STA ~~S42~~ S39 has a very hard bottom. Keith K. noted that there is more coal and small rocks in the sediment than previous dredging areas.

0415 Located at STA S43.96, resume access dredging.

0430 MCM continues access dredging.

0450 MCM continues access dredging. Skip Simpson (Envirocon) onsite. MCM getting ready to move forward. Water elevation at 600.00' AMSL

0500 MCM sweeping back and forth with crane bucket continue to dredge a few high spots

0530 MCM continues access dredging. Crane operator indicated that the sediment is very hard to dig.

0550 MCM moving dredge barge forward to STA S47.

555 MCM changing out Shuttle #2, Shuttle Full, Stop dredging. Shuttle #2 has several water leaks.

0622 Shuttle #1 tied up to dredge barge, resume dredging activities.

0630 MCM planning on changing out a dump scow at shift change

0640 MCM continue access dredging

0700 Silt curtain open for dump scow change out.

0710 ~~Brett Bishop~~ Bob Cross (MCM) onsite, Brett Bishop (Envirocon) onsite.

0715 Ken M. (Envirocon) offsite.

0720 Stop dredging for MCM shift change

0725 MCM working on dump scow change out.

0730 Diane R. (WESTON) onsite for ~~the~~ WESTON shift change.

0750 Keith K. off dredge barge to start water level collection at stilling well.

6/15/07

Carrelton Industries Site Sault Ste. Marie, MI

0801 Stilling Well Water Levels

Initial: 3.43' btoc (tape measure to the tenths of a foot)

After 3.97' btoc

Transducers pulled to download water level data, downloaded successfully. Transducers redeployed at 0810.

0820 Keith K. offsite

Keith Kidd

6/15/07

2300

2310

2330

~~2347~~ 2350

2352

000

048

050

~~0100~~ 055

0124

~~0~~ 015

0225

0250

0300

0400

6/15/07-6/16/07

Cannelton Indust. Site Sault Ste. Marie, MI
Weather: Calm, Overnight Low of 60°F, Slight wind.

2300 Keith K. (WESTON) onsite Tannery Bay for WESTON Shift change with Jody Dillon.

2310 Spoke with Jody Dillon about progress and updates. Currently located at STA 600. MCM actively dredging at start of shift. Skip Simpson (Environcon) filling in for Ken M.

2330 MCM continue dredging.

~~2350~~ MCM continue access dredging. Ken M. (Environcon) onsite

2352 ~~Moving dredge barge forward~~ KK Spud on dredge barge driven in to hold barge in place. Operator indicated that the bottom sediment was quite hard. Skip S. offsite

000 MCM continue dredging. Loading Shuttle ~~#2~~ KK 1

048 MCM pulling up Spudi to move dredge barge forward.

050 Located at ~~603~~ KK STA 603.26

~~0100~~ 055 Resume access dredging

0124 Changing out Shuttle #1, Shuttle Full.

~~0130~~ KK 0150 Shuttle # 2 tied up to dredge barge, resume access dredging

0225 Dredge 56 called on the radio and said the Manitwoc broke a cable. MCM personnel heading over to Dredge 56 to assist with repairs. Dredge barge continues access dredging.

0250 MCM continue access dredging.

0300 MCM personnel continue to work on Manitwoc crane cable repair on Dredge 56. MCM estimated the repair to take 1 to 2 hours. Dredge barge continues to ~~activity~~ KKG access dredge

0400 MCM continues access dredging, repairs still being made to the Manitwoc Crane Cable

6/16/07

Cannelton Industries Site Sault Ste. Marie, MI

0425 MCM continue access dredging. MCM crew finishing up repairs on Manitwoc crane cable.

0440 MCM changing out Shuttle #2. Shuttle Full

0445 MCM filling up crane (Link Belt) with fuel.

~~0505~~ 0510 MCM has Shuttle #1 tied up to dredge barge resume dredging activities.

0530 MCM continues access dredging.

0600 MCM moved forward to STA 603

0603 MCM resume access dredging activities

0625 MCM continues access dredging.

0636 MCM changing out Shuttle #1. Shuttle Full

0702 MCM have Shuttle #2 tied up to dredge barge, resume access dredging. Jody Dillon (WESTON) onsite for WESTON shift change

0716 Keith K. off dredge barge to collect water levels from Stilling well. Jody Dillon assisting with water levels

0755 Located at the Stilling well to pull transducers

Stilling Well Water Levels

0738 Initial: 40½" btoc

After: 40¼" btoc

0745 Water level data downloaded successfully. off site

Keith Kedder
6/16/07

6/16/07

Cannelton Industries Site Sault Ste. Marie, MI
weather: Overcast, Chance of Rain, High of 68°F, windy

~~0710~~ KK 1905 Keith K. (WESTON) onsite Tannery Bay for WESTON Shift change with Jody Dillon (WESTON)

1910 MCM located at STA 700 at Start of Shift. Ken M. and Skip S. (Enviracon) already at site trailer on dredge barge.

1920 MCM changing out Shuttles, Shuttle Full

1955 Bob Everitt (MCM) instructed crew to start waterproofing the ~~barge~~ KK Shuttles. We are quickly approaching the contaminated sediments, so the Shuttles must be water tight before dredging ~~occurs~~ occurs in those areas. Skip Simpson (Enviracon) instructed MCM on the previous shift for the need to waterproof the Shuttles.

2010 MCM also changing out dump scow, dump scow full will be transported to MCM yard for later disposal. Silt curtain will be opened for change out. Skip S. sent Ken M. home until dredging operations begin. ~~All Enviracon~~ KK No Enviracon personnel onsite. MCM cleaning out residual sediments from Shuttle to get them ready for waterproofing.

2110 Silt curtain opened for dump scow change out. Dump scow #60 used for sediments beyond 2006 dredge limits

2130 MCM working on cleaning out Shuttles, Bob Everitt (MCM) dropped off silicone sealant for Shuttles.

2200 ~~Dump Scow~~ KK MCM continue working on Shuttles

2240 MCM will be working through the night to re-waterproof the Shuttles, no active dredging will take place on shift.

2255 Keith K. offsite

Keith Kidder 6/16/07

6/17/07

Cannelton Industries Site Sault Ste. Marie, MI
Weather: Overcast, High of 64°F, Slight wind
Chance Wind, Chance of Rain Storms.

1900 Keith K. (WESTON) onsite Tannery Bay
For WESTON Shift change with Jody Dillon
(WESTON). Ken M. (Environcon) onsite

1910 MCM actively dredging, located at STA
765. Jody D. (WESTON) indicated that one
Shuttle still needed slightly more water proofing
MCM will take care of later.

1930 Located at STA 767. MCM actively dredging

1945 Shuttle #1 loaded full, will change out at
Shift change, Stop dredging

1955 MCM Shift change

2010 Dredge Shuttle #1 Stuck on edge of dredge
channel.

2033 MCM continue to have difficulties pulling dredge
Shuttle #1. Water level @ 599.3' AMSL

2040 MCM (Doug McCoy) ordered Mike P. (MCM Super)
to go on temporary Stand-by, waiting for water
levels to come up a bit. Started Raining.

2126 water level at 599.7' AMSL.

2132 MCM attempting to move Shuttle #2

2134 MCM moving Shuttle #2, Keith K. informed
Ken M. that a leak on the secondary containment
floating on Shuttle #2 Must be repaired
immediately.

2200 MCM have Shuttle #1 tied up to dredge barge

2210 Resume access dredging. Ken M. (Environcon)
told Mike P. (MCM) about the water containment
issue on Shuttle #2.

2240 MCM continues access dredging.

2320 MCM continues access dredging.

2325 MCM Stop dredging to cover up computer on crane,

Cannelton Industries Site Sault Ste. Marie, MI

rain was getting into cab.

2330 MCM resume access dredging.

001 MCM continue access dredging. Water level @ 599.8' AMSL.

010 Located at ~~771.91~~ STA 771.91

025 Ken M. (Envirocon) measured the depths of the dredged area, he found that we were still a foot shallow. Need to keep dredging to get a bottom depth of 596. Moved dredge barge back ~~767~~ STA 767.

040 MCM changing out Shuttle #1, shuttle full.

0112 MCM have Shuttle #2 tied up to dredge barge.

0116 MCM continue access dredging.

0130 MCM continue access dredging.

0150 MCM continue access dredging.

0202 MCM moving forward, located at STA 776.3

0208 MCM continue access dredging.

0230 Water level at 600.3' AMSL. MCM continue access dredging.

0245 MCM continue access dredging

0300 MCM changing out Shuttle #2, Shuttle full.

0330 MCM have Shuttle #1 tied up to dredge barge. It was noted that a significant amount of water remained on the shuttle platform between the pig pen area and the secondary containment barrier. MCM indicated that they need more pumping capacity. They only have 1 small electric pump for use currently. Mike P. put in request for new pumps.

0335 MCM resume dredging activities.

0350 MCM continue access dredging. Skip S. (Envirocon) onsite

0400 Ken M. (Envirocon) offsite, MCM continue access dredging.

0450 MCM moving dredge barge forward. Stop dredging

0455 Located at STA 779.73, resume dredging.

6/18/07

Cannelton Industries Site Sault Ste. Marie, MI

0515 MCM changing out Shuttle #1, Shuttle #1 full. Stop dredging.

0539 MCM have Shuttle #2 tied up to dredge barge

0542 MCM resume access dredging activities.

0615 Lightning Strike near dredging operations, temporarily Stopped.

0630 Heavy Rains

0640 Rains ease to a sprinkle, Still some lightning in the area, to the east.

0650 Lightning has left area, resume dredging operations.

0655 Keith K. off dredge barge to collect water levels at Stilling well.

0700 Jody Dillon (WESTON) onsite for Shift change

0715 Stilling Well Water Levels
Initial: 2' 11"
After: 2' 11 3/4"
Transducers downloaded successfully @ 0717.

0730 Keith K. offsite

Keith Kidder
6/18/07

6/18/07

Cannelton Industries Site Sault Ste. Marie, MI
weather: Sunny, Hazy, High of 78°F, Very Windy.

1555 Keith K. (WESTON) onsite, Tannery Bay
For shift change with Jody Dillon (WESTON)

1600 Active dredging being performed upon WESTON
shift change. Ken M. and Travis (Environ) onsite at 1500

1602 Changing Out Shuttle # 2, Shuttle Full
Located at STA 825.

1635 MCM have Shuttle # 1, tied up to dredge
barge. Resume dredging activities.

1640 Moved barge forward to ~~B~~ STA 832.

1642 Resume access dredging

1740 Moved Barge Forward to STA 842

1741 Resume dredging activities

1750 Shuttle # 1 Full, Shuttle changeout, Stop
dredging.

1815 Shuttle # 2 tied up to dredge barge, resume
dredging activities

1830 ~~MCM trying to~~ Noticed that a top board on
the pig pen is cracked on Shuttle # 2. Environ
notified of issue. Also significant ~~k~~ crack on bottom
of base board on pigpen at rear. Environ notified
of issue.

1850 MCM continue access dredging.

1936 MCM moving dredge barge forward.

1940 Located at STA 848

1942 MCM resume dredging operations.

1952 MCM shift change, Stop dredging.

2005 Shuttle # 2 changeout, Shuttle Full.

2029 Shuttle # 1 tied up to dredge barge

2031 MCM resume dredging operations.

2100 MCM continued access dredging.

2130 MCM continues access dredging. Noted MCM
personnel on the Shuttle near the Crane bucket when

6/18/07

Cannelton Industries Site Sault Ste. Marie, MI
dumping sediments into the pig pen. Envirocon
~~ts~~ also noted incident. Envirocon instructed MCM
personnel to stay back away from the dredge
bucket on the shuttle.

2145 MCM preparing to bring over empty shuttle, to
be staged behind the folding access gate on back of
dredge barge.

2157 MCM going to get empty ~~the~~ shuttle at
~~barge~~ Dredge 56 to stage behind dredge barge.
Access dredging continues.

2230 MCM continues access dredging.

2245 MCM stopped dredging, temporarily down due
to lightning.

~~2255~~ 2255 Keith K. off dredge barge before storm
enters area

2300 Diane R. (WESTON) onsite for WESTON
shift change.

Keith Kidder
6/18/07

6/19/07

Cannelton Industries Site Sault Ste. Marie, MI
weather: Overcast, Scattered Showers, High of 65°F, Very Windy.

1500 Keith K. (WESTON) Onsite Tannery Bay For shift change with Jody Dillon (WESTON).

1510 Active dredging taking place upon entering dredge barge. Located at STA 880. Ken M. (Environ) onsite ~~1530~~ KK MCM @ 1500. Silt curtain getting tore up in the wind.

1530 MCM continue access dredging.

1540 MCM stopped dredging due to GPS computer problems, Wayne (MCM) working on problem.

1604 MCM made repairs to the GPS computer system. Wayne set up a center line with a DMG of 0 at the edge of the approaching DMU. So currently DMG #'s are negative until we are located at the DMU ~~#~~ boundary they will then switch to positive numbers.

1605 MCM resume access dredging activities.

1625 MCM changing out Shuttle #1, Shuttle Full. Stop dredging. Winds picking up ≈ 30mph gusts

1648 MCM have ~~dredge barge~~ Shuttle #2 tied up to dredge barge. Resume dredging operations. Located ≈ 20' from edge of DMU ~~#~~.

1725 ~~Long 25 How Lat. 58 74 N~~ KK Located at: N: 634311.52 E: 26904563.2 Continue access dredging.

1730 Continue access dredging.

1738 Moving shuttle back to aid in filling the front of shuttle.

1740 Resume access dredging

1810 Shuttle #2 ~~Full, shuttle full.~~ KK nearly Full continue access dredging

1820 Changing out Shuttle #2, Shuttle Full

1830 Checked GPS Coordinates on Crane (Link-Belt). Located at: N: 634503.42 E: 26904553.31

6/19/07

Cannelton Industries Site Sault Ste. Marie, MI

1848 MCM have Shuttle # 1 tied up to dredge barge
Resume dredging operations.
1857 Moving dredge barge forward 2248
Located at: N 634301.65 E 26904594.75
1900 Continue access dredging.
1930 Continue access dredging 2310
1931 Turning back end of dredge barge to start
to square up with the southern shoreline for
access path to dock area. 2320
1945 Dredge barge turned very hard, windy conditions 2340
made it difficult to turn barge.
1950 MCM shift change.
2015 MCM fueling up Link-Belt Crane. Crane
greased also.
2020 Silt curtain getting beat up due to high winds.
2029 MCM continue access dredging.
2110 Checked GPS for N/E. Keith K. concerned that
MCM dredge barge is heading too far to the west 2350
in the access channel. Located at:
N: 634259.77
E: 26904540.68 DMG: 54
Attempted to call Wayne Cross (MCM) about
access channel questions. No answer.
2130 MCM continue access dredging.
2145 MCM changing out Shuttle # 1, Shuttle # 1 full.
2150 GPS coordinates:
N: 634250.34
E: 26904544.47 DMG: 54
2215 MCM having difficulty getting Shuttle tied up
to dredge barge due to very high winds.
2228 MCM has the Shuttle tied up to dredge barge.
2239 MCM continues access dredging. MCM should not
have to access dredge to this extent due to recent pre-

6/19/07

Cannelton Industries Site Sault Ste. Marie, MI

dredge surveys. This concern has been relayed to Envirocon.

2248 Very high winds, Crane operator does not think spuds will hold when we try to move forward May be shutting down due to high winds.

2310 Moved dredge barge forward, Located at:
N: 634244.75
E: 2690454048 DMG: 58.82

2320 Crane operator sweeping to check depth

2340 Moving forward, Keith K. off dredge barge to pick up Diane R. (WESTON) for shift change. Diane will get new GPS coordinates when she gets on barge. Keith K. informed Diane that MCM should be able to move forward almost to shore due to depths from last years dredging and the current pre-dredge survey data.

2350 Keith K. offsite

Keith Kidder
6/19/07

6/20/07

Cannelton Industries Site Sault Ste. Marie, MI
Weather: Overcast, Scattered Rain, 70°F, Slight wind.

1400 Meeting with EPA, Phelps-Dodge, CRA, MCM, and WESTON at Ramada Hotel.

1525 Keith K. (WESTON) out of meeting, heading out to Tannery Bay for Shift Change with Jody Dillon (WESTON). Travis (Envirocon) onsite rep.

1555 Keith K. at Tannery Bay. Talked to Jody D. about progress. He informed me of issues and plan for the day. Jody informed me that the barge is 5'-8' from the boundary where the working silt curtain will need to be put out. Also indicated that the bottom sediments are very hard and digging was slow. 1820

1620 Keith K. requested GPS coordinates on Link-Belt Crane location:
N: 634024.95
E: 2690455.2
DM6: 272 (from northern border of DM4-1).

1640 Bob Everitt (MCM) informed me that they are changing out clamshell bucket on Link-Belt because it cannot dig the sediments in this area effectively and efficiently. Stop dredging. 1830

1650 MCM changing out Shuttle and have the clam-shell bucket from the Link-Belt on the platform of the Shuttle, headed for Dredge 56 for bucket swap. Called Annette D. and Chris L. (WESTON) informed with updates. 1850 1920

1735 Shuttle #2 tied up to dredge barge with different Clamshell bucket. Starting to attach bucket. Also will be attaching teeth on bucket once bucket is attached. Keith K inspected silt curtain at Tannery Bay and St. Marys River boundary 1930 1935 2000

Cannelton Industries Site Sault Ste. Marie, MI

Noted that there are 2 area's of concern where the silt curtain has been torn. There are two rips in the curtain. The first rip is next to the second I-beam going from west to east. This is near the front of Dredge 56. The second rip is located next to the third I-beam going east (behind Dredge 56). These issues should be ressolved in the near future. Keith K. notified Travis (Enviroscan) of the issue. Additionally, there is a anchor, rope and buoy assembly that appears to be pulled off the curtain in between the first I-beam and second I-beam. Travis (Enviroscan) also notified of issue.

1820 MCM continue to assemble bucket to Link-Belt crane. MCM attaching the teeth to the bucket. WESTON and Enviroscan noted that crane operator and deckhand were standing underneath the clamshell bucket to attach the teeth. Enviroscan informing operator that he must be in the cab at all times and the bucket may not be energized.

1830 MCM crew putting out working silt curtain in front of dredge barge. Collected 2 photos showing silt curtain installation. MCM continue with teeth installation on bucket. Travis (Enviroscan) to Dredge 56 to inspect working conditions.

1850 MCM continue to install teeth on bucket and silt curtain.

1920 MCM continue to work on bucket and silt curtain installation.

1930 Bucket ready for dredging. 1 yd. round mouth with digging teeth.

1935 Started dredging with new clam shell bucket

2000 MCM shift change. GPS Coordinates at shift change

Stop dredging

6/20/07

Cannelton Industries Site Sault Ste. Marie, MI

are N: 634026.00
E: 2690456 1.37
DMG 278.22

2018 Waiting on MCM shift change, Silt curtain 95% up, night shift MCM crew getting last piece of curtain to close silt curtain loop. Bottom material that MCM is currently dredging is mainly Fine Sand with Clay and Silt. These sediments are very tight ~~and~~ will require additional time to dredge comparable sediments volumes to loose soft coarse sands and uncompacted silts.

2035 MCM Started dredging. Notified that computer was down

2100 MCM continue access dredging, MCM putting in last piece of silt curtain to complete the installation

2115 MCM continue to dredge, slow dredging due to hard bottom sediments. Water level at ≈600.2' AMSL (Enviroco Tide Board Reading)

2120 Travis (EnviroCon) and MCM checking depth at Front of dredge barge. Stop dredging. Attaching silt curtain to other end of silt curtain in front of dredge barge.

~~2200~~

2130 Resume dredging operations,

2145 MCM working on deepening the Starboard side of the shuttle.

2210 Keith K. informed Travis (Enviroco) and Mike P. (MCM) that dredging is not to continue beyond the WESTON boat dock due to engineering controls laid out in the Shoreline reconstruction plans. There is concern about deep dredging cuts near the Stone retaining wall. Undermining may be an

Cannelton Industries Site Sault Ste. Marie, MI
issue.

2230 MCM continue ~~the~~ dredging.

2250 MCM continue dredging.

2255 MCM continue dredging, GPS still down from start of shift change. Shuttle almost full.
Coordinates are still the same from
2000 N: 634026.00
E: 2690456.37
DMG: 278.22

2305 Diane R. (WESTON) outside Tannery Bay for shift change

2310 Keith K. offsite.

Keith Kidder
6/20/07

6/21/07

Cannelton Industries Site Sault Ste. Marie, MI
weather: Sunny, High of 67°F, Very Windy, Gusts to 35 mph.

1640 Keith K. (WESTON) onsite Tannery Bay for WESTON shift change with Jody Dillon (WESTON).

1645 MCM actively dredging upon entering dredge barge. Dredging out in front of WESTON boat dock ≈ 30' from dock.

1700 MCM working on moving light plant so that it can be lowered up to the vertical position. MCM continue dredging operations. Located at
N: 633982.81
E: 26904573.59
DMG: 1208.79

1710 Stopped dredging to work on Crane cable. Collected 3 photo's of working silt curtain.

1750 Continued dredging operations.

1751 Moved forward 11 ft. DMG: 1218. Dredging on both sides of WESTON dock, on the end.

1820 MCM continue dredging

1833 Stop dredging to change out Shuttle #2.

1857 Shuttle #1 tied up to dredge barge.

1903 Resume dredging activities

1715 MCM continue access dredging.

1730 Stop dredging, MCM shift change. Located at GPS position
N: 633960.11
E: 26904564.54
DMG: 1225.72

2000 Keith K. made sure that Envirocon and MCM were aware of the dredge extents towards the cattails and the correct dredge depths (at the WESTON dock area). Dredging will be shallow near shore, cuts of 1.0'. Dredging will advance up to the existing wooden

6/21/07

Cannelton Industries Site Sault Ste. Marie, MI

pilings.

2010 MCM Start dredging next to WESTON dock, will be dredging towards wooden pilings.

2045 MCM Continue dredging.

2100 MCM continue dredging.

2125 MCM continue dredging.

2130 MCM turning Shuttle around so crane can load opposite end of shuttle. Temporarily stop dredging. Water Level at 600.1' AMSL (Environcon Tide Board)

2142 MCM has Shuttle tied back up with the dredge barge.

2148 MCM resumes dredging.

2205 MCM continue dredging towards the shoreline next to the WESTON dock. Located about 15'-20' from dredge limit on shoreline.

2230 MCM continue dredging

2245 MCM continue dredging.

2250 MCM getting empty Shuttle to stage behind dredge barge, currently other shuttle is half Full. MCM continue dredging.

2300 Keith K. off dredge barge for WESTON shift change with Diane R. (WESTON). Keith K. went over progress and upcoming events for tonight.

Keith Kidder
6/21/07

6/22/07

Cannelton Industries Site Sault Ste. Marie, MI
weather: Sunny, High of 72°F, windy

1430 Keith K. (WESTON) onsite Tammery Ray for WESTON shift change with Jody Dillon (WESTON). Travis (Envirocon) on dredge barge.

1440 Helped Chris L. (WESTON) with boat motor for Zodiac boat. MCM changed out alternator on crane.

1445 MCM actively dredging. Located at Dredge Lane 1. ~~at~~ STA GPS currently down, no coordinates available.

1500 MCM continue access dredging.

1525 ~~1540~~ MCM changing out Shuttle, Shuttle full.

1605 MCM have Shuttle tied up to dredge barge.

1608 Moving dredge barge to the Star board side to access sediments in that area.

1610 Continue ~~dre~~ dredging in Dredge Lane 1

1625 Collected 3 photo's of active dredging in Dredge Lane 1. Photo 1 shows blackish gray sediments and wood debris dredged from Lane 1. Photo 2 shows dredging looking west. Photo 3 shows clam shell bucket removing debris and sediments.

1632 Moving dredge barge to the Star board side to reach sediments.

1634 Continue dredging in Dredge Lane 1. Located approximately near the ~~40 STA~~ STA 40.

1650 All buckets from the starboard side of dredge were dredged down to ≈ 4.1'. Buckets looked good all passed. Light to dark brown fine sand. Very slight grayish fine sand and silt on top 1" thick.

1700 Continue dredging, crane operator checking depth near center line of Dredge Lane 1.

1718 Changing out Shuttle, Shuttle full, will check depth at center line and port side when empty Shuttle gets back to dredge barge.

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6/22/07

Cannelton Industries Site — Sault Ste. Marie, MI

1741 MCM tug boat down, mechanical issue, while transporting the empty Shuttle back to the dredge barge

1800 MCM have Shuttle tied up to dredge barge. Resume dredging. Ken M. (Envirocon) onsite, Travis (Envirocon) offsite.

1830 MCM continue to dredge sediments from Dredge Lane 1.

1840 Buckets from centerline and port side passed inspection at the STA 40 Area. Moving Forward.

1845 Wayne Cross (MCM) onsite to fix computer GPS issue. (Reloading STA#'s for Dredge Lanes)

1900 Keith K. and Ken M. heading out for turbidity readings. Changing out Shuttle, Shuttle full.

Mark	Northing	Westing	Turbidity (NTU)
055	46°29.802'	084°23.350'	2.32
056	46°29.781	084°23.388'	3.88
057	46°29.733	084°23.415'	1.41
058	46°29.761	084°23.442	0.61
059	46°29.810	084°23.394	1.43
060	46°29.778	084°23.333	7.84
061	46°29.731	084°23.356	9.75
062	46°29.586	084°23.261	76.7
063	46°29.585	084°23.297	48.2

1945 Completed turbidity readings, windy conditions have made the bay turbid.

1950 MCM had Shuttle tied up to dredge barge @ 1928. Resume dredging.

2028 MCM changing out Shuttle, Shuttle full.

2056 MCM have empty Shuttle tied up to dredge barge. Located at STA 37 (corrected actual location in Dredge Lane 1) Wayne C. (MCM) fixed GPS computer. Resume dredging.

2105 MCM continues dredging in Dredge Lane 1

6/22/07

Cannelton Industries Site Sault Ste. Marie, MI

2115	MCM continue dredging in Dredge Lane 1. Test buckets passed at Starboard, port, and center line at STA 37.	0700
2140	Stop dredging for MCM shift change. Located at STA 39. Mike Trembley (MCM) greasing clam shell bucket.	0705 0720
2155	Night shift start work, Shuttle change out, Shuttle full	
2250	MCM has shuttle tied up to dredge barge.	0750
2300	Resume dredging in Dredge Lane 1 at STA 39. A total of 15 shuttles filled during shift from 1430 to 2300	0759 0830 0848
2305	Keith K. offsite for WESTON shift change with Diane R. (WESTON)	0851 0900
	Keith Kidder 6/22/07	0920
		0940
		1000 1018 1020 1045 1120
		1130 1143
		1215

6/22/07
Ste. Marie, MI
1. Test
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6/23/07

Cornelton Industries Site Sault Ste. Marie, MI
Weather: Partly Cloudy, High of 74°F, Slight wind.

0700 Keith K. (WESTON) onsite Tannery Bay for Shift change with Diane R. (WESTON). Travis (Environ.) onsite

0705 Assist Diane R. with Stilling well water levels

0720 Shuttle Full, changing out Shuttle. Diane R. indicated issues with Spuds on the night Shift. It needs a new Starter. Starter will be replaced this morning. Located at Dredge Lane 1 at STA 68.5.

0750 MCM has empty Shuttle tied up to dredge barge. Fueling up the Link-Belt Crane

0759 MCM resume dredging in Dredge Lane 1.

0830 MCM continue dredging in Dredge Lane 1

0848 MCM moved barge forward slightly. Located at STA 68.35 in Dredge Lane 1.

0851 Continue dredging.

0900 Bob Chartrand (MCM) working on spud diesel engine starter. MCM continue dredging in Dredge Lane 1.

* 0920 Changing out Shuttle, Shuttle Full. Stop dredging. Starter on spud engine will be repaired on Tuesday.

0940 MCM resume dredging in Dredge Lane 1. Empty shuttle tied up to dredge barge.

1000 MCM continue dredging in Dredge Lane 1.

1018 Moved dredge barge forward and slightly toward the centerline.

1020 Resume dredging activities.

* 1045 Shuttle Full, Stop dredging. Changing out Shuttle.

1120 Shuttle tied up to dredge barge, resume dredging in Dredge Lane 1.

1130 Stop dredging for MCM Shift change.

1143 MCM resume dredging at Dredge Lane 1. Located at STA 68.35. Water level at 600.4' AMSL (Envirocon Tide Board)

1215 MCM continue dredging in Dredge Lane 1.

6/23/07

Cannelton Industries Site Sault Ste. Marie, MI

1220 Keith K and Travis (Envirocon) heading out to collect turbidity readings. Turbidity meter calibrated with no problems.

1225 Started collecting Turbidity Readings at Tannery Bay.

Mark	Northing	Westing	NTU (Turbidity)
064	46°29.805	84°23.325	0.78
065	46°29.785	84°23.375	0.75
066	46°29.732	84°23.417	0.59
067	46°29.772	84°23.440	0.56
068	46°29.815	84°23.375	0.19
069	46°29.77[illegible]	84°23.336	1.35
070	46°29.740	84°23.352	1.28
071	46°29.620	84°23.256	25.5
072	46°29.572	84°23.282	24.6

* 1245 Completed turbidity readings. MCM changing out Shuttle, Shuttle full, ~~Stop~~ Stopped dredging.

1247 Crane operator greasing crane

1318 MCM has Shuttle tied up to dredge barge

1321 Resume dredging in Dredge Lane 1 at STA 70 at the centerline. Collected test buckets at port, starboard, and centerline from STA 65 to STA 70. Cut in this area is ≈ 4.2'-4.0'. Encountered a light Brown to Gray Fine Sand and Trace Silt, Stiff, with no debris in test buckets. All buckets passed.

1330 MCM continue dredging.

1341 Travis (Envirocon) offsite

1345 Norm (Envirocon) onsite

1410 MCM continue to dredge in Dredge Lane 1.

1425 MCM stop dredging, Shuttle full

1428 Opening silt curtain for dump scow change out.

1508 Silt curtain closed, dump scow changed out. Scow #60 full heading to the yard. Continue to wait for empty shuttle from Dredge 56. Scow 59 at Tannery Bay

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* 1900
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6/23/07

Cannelton Industries Site Sault Ste. Marie, MI

* 1522 MCM changing out Shuttle, Shuttle Full
1603 MCM has empty Shuttle tied up to dredge barge
1605 MCM continue dredging at Dredge Lane 1.
1613 MCM moving silt curtain (working curtain) up Further onto the shore. Adding more sections to accomodate water level rise to ensure complete silt curtain coverage around the dredge area. KK MCM continue dredging in Dredge Lane 1
1650 MCM continue dredging in Dredge Lane 1.
* 1732 Shuttle Full, MCM changing out Shuttle. Stop dredging
1805 MCM KK has empty Shuttle tied up to dredge barge.
1808 Resume dredging at Dredge Lane 1. Located at STA 82.
1830 MCM continue KK dredging
1845 Moved dredge barge ahead. Located at STA 84 at the centerline at Dredge Lane 1.
1847 Continue dredging at Dredge Lane 1.
1855 Continue dredging at Dredge Lane 1.
* 1900 Shuttle Full, Changing out Shuttle, Stop dredging
1902 A total of 7 Shuttles changed out from 0700 - 1900.
1905 WESTON Shift change, Keith K. offsite Diane R. onsite.

Keith Kiddle
6/23/07

6/24/07

Cannelton Industries site Sault Ste. Marie, MI

weather: Sunny, High of 80°F, Slight wind

0710 Keith K. (WESTON) onsite Tannery Bay for WESTON shift change with Diane R.

0715 Diane R. informed me that MCM just moved forward to STA 139.31 at Dredge Lane 1.

0730 MCM dredging at Dredge Lane 1. Brett B. (Envirocon) onsite at 0710.

* 0745 MCM Stop dredging, Shuttle full, changing out shuttle

820 MCM have empty Shuttle tied up to dredge barge. Resume dredging in Dredge Lane 1. MCM adjusted working curtain. * 1400

0840 MCM continue dredging in Dredge Lane 1. 1445

*0925 MCM changing out Shuttle, Shuttle full

0956 Moved dredge barge forward to location STA 149. Buckets had light Brown Fine to Med. Sand in bottom before moving. 1570 1515

0959 Resume dredging activities in dredge lane 1. 1519

*1040 Shuttle full, waiting for Shuttle change out operator on Dredge 56 not done unloading yet. Stop dredging. * 1535

~~1105~~ KK 1100

~~1109 Empty Shuttle tied up to dredge barge~~ KK. 1604

~~1114-1120 Resume dredging~~ RK 1610

1131 MCM had boat troubles to get shuttle tied up to dredge barge. Shuttle now tied up to dredge barge. Resume dredging. * 1650

1145 Stop dredging for MCM shift change.

1149 Resume dredging in Dredge Lane 1. 1710

* 1225 Shuttle full, changing out Shuttle. will be a delay for empty Shuttle. Dredge 56 ~~op~~ Manitwoc not done unloading yet. 1715

1320 Empty Shuttle tied up to dredge barge. Resume dredging 1735

1330 Keith K. and Brett B. heading out to collect turbidity readings at Tannery Bay. 1847

1335 Turbidity meter calibrated with no problems.

6/24/07

Cannelton Industries Site — Sault Ste. Marie, MI — 6/24/07

Mark	Northing	Westing	Turbidity (NTU)
073	46°29.799	84°23.302	0.70
074	46°29.794	84°23.364	0.54
075	46°29.766	84°23.390	0.63
076	46°29.767	84°23.443	0.83
077	46°29.810	84°23.370	0.44
078	46°29.781	84°23.325	4.85
079	46°29.744	84°23.344	4.30
080	46°29.608	84°23.254	24.50
081	46°29.581	84°23.299	41.60

* 1400	Finished ~~loaded~~ KK loading ~~dredge barge~~ Shuttle. Shuttle Full Changing out Shuttles
1445	Empty Shuttle tied up to dredge barge, Resume dredging at Dredge Lane 1.
1510	MCM continues dredging at Dredge Lane 1.
1515	Located at STA 157. Moved forward
1519	Resumed dredging.
* 1535	Stopped dredging, barge mostly Full, changing out Shuttle before dump scow change out.
1604	Brett B. offsite, Norm C. (Envirocon) onsite
1610	MCM has empty Shuttle tied up to the dredge barge. Resume dredging at Dredge Lane 1.
* 1650	MCM has Shuttle full, MCM opening silt curtain for dump scow change out. Stopped dredging
1710	Continue to wait for tug to get to Tannery Bay, silt curtain continues to be open.
1715	Tug showed up at Tannery Bay, starting dump scow changeout.
1735	Silt curtain ~~closed~~ KK closed, starting Shuttle Changeout. No dredging
1847	Empty Shuttle tied up to dredge barge. Resume dredging in ~~SA~~ KK Dredge Lane 1.

6/24/07

Cannelton Industries Site Sault Ste. Marie, MI

1855 Located at STA 157 (same as previous).

1900 Thus far today, MCM dug to the top of the light brown Fine to Medium Grained Sand, Trace Silt, Stiff, before moving forward.

1904 Keith K off barge for WESTON shift change with Diane R.

Keith Kidder
6/24/07

0700

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1010

Cannelton Industries Site Sault Ste. Marie, MI
Weather: Sunny. High of 78°F. Slight wind.

0700 Keith K. (WESTON) onsite Tannery Bay for WESTON shift change with Diane R. (WESTON).

0715 Diane R. offsite. She indicated that MCM was located at STA 190 at Dredge Lane 1. Also, she indicated that low water levels had caused some delays with the shuttles being stuck.

0720 MCM dredging at Dredge Lane 1. Travis (Envirocon) onsite at 0710.

0730 MCM moved dredge barge forward to STA 196. Before moving it was confirmed that the clean Brown to Light Gray Fine to Med. Sand, Trace Silt, Stiff, was encountered. Buckets from the port, starboard, and centerline were observed.

0748 Shuttle Full, Changing out Shuttle, Stop dredging.

0750 Water level at 599.70' AMSL, MCM Stuck on bottom with shuttle. ~~[illegible]~~ Water level recorded off ~~[illegible]~~ from ~~[illegible]~~ Envirocon Tide Board.

0800 Continue to wait for water levels.

0845 MCM trying to get Shuttle pulled off bottom.

0905 MCM finally got shuttle pulled off bottom, for shuttle changeout. Wayne C. (MCM surveyor) onsite to check dredge depths.

0940 Wayne C. indicated that the dredge depth is approximately 0.7' AMSL to 1.0' AMSL high approx. 90'-100' behind the bow of the dredge barge.

0952 Resume dredging. Wayne C. indicated that the measurements on the bucket were 6"-8" off the correct depths. Measurements have been corrected. The plan is to dredge backward towards the high areas behind the dredge barge.

1010 Continue dredging at Dredge Lane 1. (Redredge) STA 195

6/25/07

Cannelton Industries Site Sault Ste. Marie, MI

1115 Continue Redredging at Dredge Lane 1

1118 moving barge backward to continue redredging effort. Stopped dredging. Crane greased. Crane fueled.

1125 MCM off barge for shift change.

1200 MCM resume redrege effort

1210 Keith K. and Travis (Enviracon) heading out to collect turbidity readings. Turbidity meter calibrated.

Mark	Northing	Westing	Turbidity (NTU)
082	46°29.805	84°23.304	2.78
083	46°29.792	84°23.354	0.03
084	46°29.768	84°23.396	1.27
085	46°29.774	84°23.418	0.50
086	46°29.809	84°23.363	0.51
087	46°29.770	84°23.331	14.2
088	46°29.731	84°23.367	6.52
089	46°29.585	84°23.295	88.2
090	46°29.585	84°23.263	21.9

1212 Shuttle Stuck on bottom, Tugboat Stuck on log or rock.

1230 Tugboat unstuck, Still trying to get Shuttle unstuck.

1300 Continue to attempt getting the Shuttle unstuck.

1340 Shuttle unstuck, attempting to pull dredge barge backwards for redredge effort.

1410 Continue trying to get dredge barge unstuck.

1505 Dredge barge unstuck.

1515 Setting up to resume redredge effort at Dredge Lane 1.

1530. Diane R. instructed to keep track of the Station locations as the dredge barge moves.

1535 Keith K. offsite for shift change with Diane R.

Keith Kidder 6/25/07

6/26/07

Cannelton Industries Site Sault Ste. Marie, MI

Weather: Hazy, Calm, High of 83°F, Slight wind

0700 Keith K. (WESTON) onsite Tannery Bay for shift change with Jody Dillon (WESTON).

0705 Jody D. collecting water level data at stilling well. Upon entering dredge barge, Shuttle was Full. Ken M. (Enviracon) rep. onsite.

* 0710 Changing out Shuttle

0748 MCM has empty shuttle tied up to dredge barge, resume dredging in Dredge Lane 1. Redredge effort still underway. MCM moved back to STA 000 during previous shifts and started dredging forward. Currently located at STA 102 and actively dredging forward.

0800 MCM informed of the silt curtain issues next to Dredge Sta. There are a few tears in the curtains and a 15' gap at the last piling where the curtain is tied up.

0820 Continue redredge effort at Dredge Lane 1. Water level at 600.0' AMSL (MCM/Enviracon Tide Board)

0849 Move forward to STA 115. Brett R. (Enviracon) onsite @ 0859

* 0900 Shuttle Full, changing out Shuttle, stop dredging.

0941 Shuttle tied up to dredge barge, resume redredge effort in Dredge Lane 1.

1000 Continue ~~dredging~~ redredging effort.

~~1050~~ 0950 Keith K. took Skip S. (Enviracon) out to silt curtain to show him the damage and needed repairs. Several photos

~~0950~~ collected to document the silt curtain.

1024 Moved to STA 124.5, depth confirmed in front of barge by (Enviracon) before moving forward.

1026 Continue redredge effort in Dredge Lane 1.

* 1042 Shuttle full, changing out Shuttle.

1055 MCM fixing hydraulic fluid issue on Tug boat at Dredge Sta during shuttle change out.

6/26/07

Cannelton Industries Site Sault Ste. Marie, MI

1125 Empty Shuttle, tied up to dredge barge.

1132 MCM Shift change, Mike P. (MCM) indicated more issues with the Tugboat. There is a blown hydraulic line on the engine. There is no steering or other controls. Hydraulic fluid accumulated in bottom of engine room.

1147 MCM start dredging (redredge effort).

1200 Bob Chartrand (MCM) onsite to help ~~fix~~ repair the blown hydraulic line.

1205 MCM continue to dredge sediments (redredge effort), in dredge lane 1.

1220 Water Level at 599.8' AMSL (Envirocon/MCM) tide board.

1228 ~~Operator~~ Crane Operator noted a ~~[illegible]~~ DMG of 106. This is STA 106 off the very front of the bow. Previous STA #s were given off the edge of the next cut, which is usually 15-20' in front of the bow. Moved forward at 1227.

1230 Continue redredge effort at Dredge Lane 1.

1245 Continue redredge effort at Dredge Lane 1.

1259 Moved forward, Located at STA 120 off the very front bow. Envirocon confirmed dredge depths are OK before moving forward. Tugboat hydraulic line has been repaired.

* 1300 Shuttle full, waiting for MCM to pull shuttle off for shuttle change out.

1315 Changing out shuttles.

1310 Keith K. and Brett B. (Envirocon) heading out to collect turbidity readings. Turbidity meter calibrated with no problem

	Mark	Northing	Westing	Turbidity (NTU)
outside curtain is yellow	091 at gap on end	46°29.795	84°23.288	1.62
100' outside yellow curtain	092	46°29.771	84°23.384	0.68
100' outside yellow curtain	093	46°29.741	84°23.404	0.45

200' outside yellow curtain
200' outside yellow curtain
next to curtain (yellow) gap inside
next to inside curtain
Dredge 56
South of Dredge 56
200' from dredge barge
100' from dredge barge

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6/26/07

Cannelton Industries Site — Sault Ste. Marie, MI

	Mark	Northing	Westing	Turbidity (NTU)
200' outside yellow curtain	094	46°29.770	84°23.419	0.62
200' outside yellow curtain	095	46°29.808	84°23.382	1.51
next to curtain (yellow) gap inside	096	yellow curtain 46°29.790	84°23.301	7.75
next to inside curtain Dredge 56 south of	097	46°29.772	84°23.308	9.26
Dredge 56	098	46°29.745	84°23.344	2.64
200' from dredge barge	099	46°29.581	84°23.285	42.0
100' from dredge barge	100	46°29.572	84°23.310	30.7

several photos collected of the yellow turbidity curtain

1317 MCM working on Manitwoc cable/boom issue
1340 Manitwoc repaired.
1400 MCM has empty shuttle tied up to the dredge barge.
1405 Resume redredge effort in Dredge Lane 1.
1410 Wind has picked up to 10mph. Tannery Bay turbid.
1420 MCM continue redredge effort at Dredge Lane 1
1435 Moved to the ~~po~~ Starboard side still located at/near STA 120.
1447 Continue redredge effort at Dredge Lane 1.
1500 Keith K. off dredge barge for shift change with Diane R. (WESTON)
1510 Keith waiting for Diane R.
1512 Diane R onsite
1513 offsite

Keith Kelly
6/26/07

6/27/07

Cannelton Industries Site Sault Ste. Marie, MI
weather: Partly Cloudy, Chance of Storms, High of 71°F, Slight wind. 1120

0700 Keith K. (WESTON) onsite Tannery Bay for WESTON shift change with Jody Dillon (WESTON) 1125
Jody indicated that forward progress was made throughout the night shift. Computer went down on shift.
MCM actively dredging upon entering dredge barge. 1135

* 0705 MCM changing out Shuttle, shuttle full, Wayne C. (MCM) onsite to fix computer.

0715 Computer fixed. Wayne C. indicated that the dredge barge is located at STA 200. Skip S. and Travis (Enviroon) reps onsite.

0745 Shuttle tied up to dredge barge

0746 Wayne C. working on computer again

0758 MCM resume dredging activities in dredge lane 1.

0824 MCM moving dredge barge forward, stop dredging

0826 MCM resume dredging activities in Dredge Lane 1. 1200

* 0850 Shuttle full, changing out shuttle, stop dredging.

0930 Empty shuttle tied up to dredge barge. Wayne C. working on computer again 1230 1248

0938 Computer issue resolved, resume dredging.

* 1014 Shuttle full, changing out shuttle, stop dredging 1300
Bob Chartrand and MCM crew from yard working on silt curtain repairs today. 1335

1048 MCM has shuttle tied up to the dredge barge. Currently located at STA 210 just to the port of centerline. * 1405

1050 Radio call from Dredge 56 indicated a crane cable broke and will need assistance with repair. 1435 1440

1055 Moved dredge back 5 feet to get a slight high spot on the port tow. Crane operator continues to dredge, other MCM crew members help repair crane cable on Dredge 56. 1455 1500

6/27/07

Cannelton Industries Site Sault Ste. Marie, MI

1120 Stop dredging. Fueling up crane before shift change (MCM).

1125 Keith K. and Travis (Enviroscan) heading out to collect turbidity readings. Turbidity meter calibrated with no problems. Read 10.0 NTU cuvette at 10.0.

1135

Mark	Northing	Westing	Turbidity (NTU)
101	46°29.801	84°23.297	0.27
102	46°29.790	84°23.356	0.06
103	46°29.755	84°23.401	0.03
104	46°29.773	84°23.414	0.02
105	46°29.806	84°23.355	0.02
106	46°29.773	84°23.331	2.96
107	46°29.746	84°23.342	3.01
108	46°29.575	84°23.275	41.9
109	46°29.562	84°23.317	31.9

200 MCM Start dredging, Dredge 56 Manitwoc Crane still being repaired. Continue dredging for now.

230 MCM continue dredging in Dredge Lane 1.

248 Stop dredging, Shuttle nearly full, crane repairs still underway on Dredge 56.

1300 Continue to wait for repairs on Manitwoc crane.

1335 Manitwoc repaired, Started unloading full shuttle already at Dredge 56. Dredge barge has a nearly full shuttle ready for changeout.

1405 Changing out Shuttle,

1435 Empty Shuttle tied up to dredge barge

1440 Resume dredging at Dredge Lane 1. Located at STA 211 just off the bow. Next cut is 10'-15' beyond this Station location.

1455 MCM continues dredging in Dredging Lane 1.

1500 Keith K. offsite for shift change with Diane R. (WESTON)

6/27/07

Cannelton Industries Site Sault Ste. Marie, MI

* 1535 Shuttle full, changing out shuttle

1540 A total of 5 shuttles filled on 1st shift.

1548 Diane R onsite ~~to~~

Keith Kidder
6/27/07

0700

* 0710

0735

* 0813

0852

0853

0920

0942

0950

* 1000

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1042

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1110

1125

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1156

1230

1250

1251

27/07
, MI

6/28/07 169

Cannelton Industries Site — Sault Ste. Marie, MI

Weather: Sunny, windy, High of 70°F

0700 Keith K. (WESTON) onsite at Tannery Bay for shift change with Jody Dillon (WESTON)

* 0710 MCM changing out Shuttle, Shuttle Full. Ken M. (Envirocon) offsite, Travis L. (Envirocon) onsite rep. Located at STA 261.

0735 MCM has empty Shuttle tied up to dredge barge resume dredging.

* 0813 MCM changing out Shuttle, Shuttle Full.

0852 MCM has empty shuttle tied up to dredge barge.

0853 Resume dredging at Dredge Lane 1.

0920 MCM continues dredging at Dredge Lane 1.

0942 Wayne C. (MCM) onsite, Stop dredging so Wayne C. can get data from computer in crane.

0950 Resume dredging.

* 1000 MCM changing out ~~dred~~ left Shuttle, Shuttle Full.

1039 MCM has empty Shuttle tied up to the dredge barge

1042 Computer down in Link-Belt Crane, Stopped dredging

1045 Possible electrical problem from the light plant (GFI)

1055 ~~Dred~~ left MCM greasing crane, boom, refueling. Envirocon and MCM will work on electrical issue. Mike P. (MCM) calling to get help fixing.

1110 MCM moved the dredge barge back a 10 feet to take off a high spot @ 1040. Also noticed a frayed cable on the digging line.

1125 Computer will be run from the welder power outlet until GFI on light plant is fixed. Computer back up and running. Link-Belt Crane is greased and fueled.

1130 Shift change for MCM.

1156 Resume dredging activities at Dredge Lane 1. Located at STA 250.

1230 MCM continue dredging at Dredge Lane 1.

1250 MCM continue to dredge sediments at Dredge Lane 1.

1251 Moved to STA 272.

6/28/07

Cannelton Industries Site Sault Ste. Marie, MI

1252 Turbidity meter calibrated with no problems.

1300 Keith K. and Travis L. (Envirocon) heading out to collect turbidity readings.

Mark	Northing	Westing	Turbidity (NTU)
110	46°29.805	84°23.294	1.37
111	46°29.789	84°23.363	0.84
112	46°29.740	84°23.407	1.00
113	46°29.774	84°23.421	0.64
114	46°29.802	84°23.382	0.78
115	46°29.779	84°23.329	5.45
116	46°29.580	84°23.289	25.3
117	46°29.580	84°23.328	43.5

* 1300 MCM changing out shuttle, shuttle full.

1329 Shuttle tied up to dredge barge, resume dredging in Dredge Lane 1.

1340 Continue dredging in Dredge Lane 1. Located at STA ~~275~~ 250.

1400 MCM continue dredging at Dredge Lane 1.

* 1409 MCM changing out shuttle, shuttle full.

1438 MCM has empty shuttle tied up to the dredge barge. Resume dredging in ~~the~~ Dredge Lane 1. Located at STA 257. Travis L. offsite Norm C. (Envirocon) onsite.

1450 MCM continues dredging at Dredge Lane 1.

1458 Keith K. off dredge barge for WESTON shift change with Diane R. Currently, shuttle is almost full, Diane R. will count on her shift.

1515 offsite.

Keith Kidder
6/28/07

0700
0710
~~0815~~ 0814
* 0815
0822
0850
0855
0857
0910
0925
0945
* 1050
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1122
1130
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1239
1300
1310

6/29/07

Cannelton Industries Site Sault Ste. Marie, MI
Weather: Sunny, Cool, High of 71°F, Slight wind

0700 Keith K. (WESTON) onsite Tannery Bay For dredging oversight.

0710 MCM actively dredging upon entering the dredge barge. Located at STA 305. MCM starting to open silt curtain. Shuttle almost Full. Dump Scow will be changed out this morning. Ken M. (Enviroscan) offsite, Travis L. (Enviroscan) onsite rep.

~~0815~~ 0745 Dump Scow changed out.

x 0815 Shuttle Full, shuttle being changed out, stop dredging.

0822 Dave S. (Enviroscan) and Travis have H_2S monitors on dredge barge and MultiRae PID for air monitoring.

0850 MCM has empty Shuttle tied up to dredge barge

0855 MCM resume dredging. Located at STA 311

0857 Stop dredging, MCM fixing silt curtain, Stop dredging

0910 Continue to work on silt curtain

0925 MCM resumes dredging

0945 MCM continue dredging in Dredge Lane 1.

x 1050 MCM changing out Shuttle, Shuttle full.

1052 Dave S. (Enviroscan) off dredge barge.

1122 MCM has empty shuttle tied up to dredge barge MCM greasing and fueling crane.

1130 MCM shift change

1210 MCM resumes dredging in Dredge Lane 1.

1220 Located at STA 331. MCM continue dredging.

1221 MCM repairing Flexi-Float. Stop dredging

1239 MCM resume dredging

1300 MCM continue dredging in Dredge Lane 1.

1310 Turbidity meter calibrated with no problems.

6/29/07

Cannelton Industries Site — Sault Ste. Marie, MI

* 1328 Shuttle Full, changing out Shuttle.

1335 Keith K. and Travis heading out to collect turbidity readings.

Mark	Northing	Westing	Turbidity (NTU)
118	46°29.799	84°23.291	0.51
119	46°29.786	84°23.355	0.79
120	46°29.755	84°23.401	0.40
121	46°29.772	84°23.429	0.22
122	46°29.810	84°23.363	0.55
123	46°29.781	84°23.326	3.86
124	46°29.749	84°23.343	3.38
125	46°29.579	84°23.304	44.8
126	46°29.576	84°23.347	61.7

1355 Empty Shuttle tied up to dredge barge.

1400 Resume dredging

1425 Located at STA 351. This is the end of the cut at Dredge Lane 1. Small portions of sediments to be dredged off the port tow and starboard tow will be dredged on later dredge lanes.

1440 Moving dredge barge back to Start of Dredge Lane 2. Norm C. (Enviroscan) onsite

1500 Moving silt curtain, for dredging in Dredge Lane 2. Travis L. offsite.

1600 Silt curtain (working) put in place for dredging in Dredge Lane 2. MCM Start dredging in Dredge Lane 2. Currently located at STA-015. Crane operator will sweep bottom up to STA 000 to ensure that top of sediment elevation is adequate for draft requirements.

1610 Operator of the Link Belt Crane will need to take several buckets from area in front Dredge Lane 2.

1630 Moved dredge barge forward to STA-004.

* 1640 ~~Dredge Barge~~ Shuttle Full, changing out ~~dredge barge~~ Shuttle.

6/29/07

Cannelton Industries Site Soult Ste. Marie, MI

1702 MCM have Shuttle tied up to dredge barge.
1704 Resume dredging in Dredge Lane 2.
1730 MCM continue dredging in Dredge Lane 2.
1750 MCM continues to dredge sediment in Dredge Lane 2. Loaded at STA 001. Shuttle almost Full.
1755 Keith K. off dredge barge for Shift change with Diane R.
1805 offsite

Keith Kilb
6/29/07

174

7/2/07 - 7/3/07

Cauchton Industries Site Sault Ste. Marie, MI

weather: Chance of Rain, Calm over the overnight. ~~High~~ * 0
~~Low~~ Low of 55°F overnight 0

2255 Keith K. (WESTON) onsite at Tamen Bay for WESTON shift change with Andy Kiel (WESTON). ~~Ken~~ Ken M. (Envirocon) onsite rep. 06

2300 Perform pre-trip inspection on the boat before heading out. Andy Kiel indicated that MCM was located at Dredge Lane 2 and at STA 235. Also indicated that some over dredging may be required. * 06

2310 MCM refueled Link-Belt, greased, etc.

2330 MCM shift change. 06

* 2345 ~~Barge~~ Shuttle full from shift before, change out shuttle. 07

0030 MCM has empty shuttle tied up to dredge barge.

0040 Mike P. (MCM) informed me that the torque converter on the Manitowoc Crane on Dredge 56 may need repairing. MCM start dredging at Dredge Lane 2 while other MCM personnel take a look at crane. 0100 Manitowoc crane fixed. 0

* ~~1500~~ 0120 Shuttle full, changing out shuttle. Keith K. collected 4 photos of the dredging activities.

0155 ~~1555~~ MCM have empty shuttle tied up to dredge barge. Water level @ 600.0' AMSL (Envirocon/mean tide board) 0

0205 ~~1605~~ MCM resume dredging activities.

0213 ~~1613~~ Dredge bucket broke. A large bolt has been sheared off one of the steel arms on the bucket. MCM starting to make repairs. Dredging stopped. Also, need to find the washer that was attached to the bucket.

0302 Bucket repaired for now, resume dredging.

* 0326 Shuttle full, MCM changing out shuttle. Stop dredging.

0405 MCM has empty shuttle tied up to dredge barge

0410 ~~Resume dredging.~~ MCM retrofitting a washer/spacer onto bucket to complete bucket repair.

0420 Bucket repaired, resume dredging at Dredge Lane 2

7/2/07 - 7/3/07

Cannelton Industries Site Sault Ste. Marie, MI

0508 Shuttle full, changing out shuttle

0550 MCM has empty shuttle tied up to dredge barge. Resume dredging in Dredge Lane 2. Working on the port side of Dredge Lane 2 near STA 235.

0618 Moved forward to STA ~~248~~ 242. Before moving all buckets had light brown sand with trace silt in bottom. Area was dredged to 40' (596' ANS)

0642 Shuttle full, MCM changing out shuttle, centerline STA 248.9. (Boomed out to next cut). Skips. (Enviro con) onsite.

0657 Skips. offsite.

0700 Keith K. off dredge barge for WESTON shift change.

0712 Diane R. (WESTON) onsite, Diane collecting transducer water levels at stilling well and downloading water level data.

0720 Total of 5 shuttles filled on shift.

0724 Diane R. collected the following water level measurements
Initial: 40 1/2"
After: 40 3/4"

0730 Keith K. offsite

Keith Kidder
7/3/07

7/4/07

Cannelton Industries Site Sault Ste. Marie, MI

weather: Cloudy, Chance of Rain, High of 78°F, Slight wind.

0800 Keith K. (WESTON) onsite, Tannery Bay for silt curtain repair oversight. MCM moved the dredge barge and Link Belt Crane out of bay and outside silt curtain to work on repairs with the curtain.

0810 MCM Starting to put in orange silt curtain material where holes have been identified in the yellow curtain

0900 MCM making silt curtain repairs. Collected 3 photo's of silt curtain repair activities

1000 MCM continue to work on silt curtain

1100 MCM continue to work on silt curtain repairs

1200 MCM continue to repair silt curtain, Keith K. offsite for shift change with Andy Kiel (WESTON)

Keith Kidder
7/4/07

7/5/07 7:4:7

Cannelton Industries Site Sault Ste. Marie, MI

weather: Calm and Cool during the Overnight, Low of 58°F. Slight wind.

~~1055~~ 1CK Keith K. (WESTON) onsite Tannery Bay for WESTON shift change with Andy Kiel. Andy indicated that MCM, was located at STA 311. There may be a possible over dredge area in the southwest corner of DMU-9.

~~1105~~ 1KK MCM continue dredging at Dredge Lane 2.

2338 MCM has shuttle full, stop dredging. MCM shift change at 2345. Next shift will change out shuttle. Ken M. (Environ) rep. onsite @ 2245.

2342 MCM day shift crane operator showing new night shift operator the controls on the crane and the dredging areas.

0007 MCM changing out shuttle, Shuttle full from previous shift. Located at STA 319.

0043 MCM has empty shuttle tied up to dredge barge.

0048 MCM resumes dredging activities at Dredge Lane 2.

0146 MCM changing out shuttle, shuttle full. Crane operator currently dredging to 596' AMSL. Clean sand observed in bottom of buckets at STA 320.

0222 MCM has empty shuttle tied up to dredge barge

0224 MCM resume dredging activities at Dredge Lane 2.

0320 MCM changing out shuttle, shuttle full.

0357 MCM has shuttle tied up to dredge barge

0400 MCM resume dredging.

0425 MCM moving dredge barge to the Star board side at STA 320.

0450 MCM changing out shuttle, shuttle full.

0535 MCM has empty shuttle tied up to dredge barge. Resume dredging. Mike P. (MCM) indicated that the dump scow is full and will be changed out

.78

7/6/07

Cannelton Industries Site Sault Ste. Marie, MI

this morning. MCM will fill shuttle then stop dredging for scow changeout. Water level at 600.5' AMSL. MCM dredging to 596' AMSL.

0600 MCM continue dredging in Dredge Lane 2.

0627 MCM stop dredging, Shuttle Full.

0630 MCM preparing to open silt curtain for dump scow changeout. Located at STA 333.

0645 MCM opening silt curtain for dump scow change-out.

0700 Keith K. off dredge barge for WESTON shift change. Chris L. (WESTON) and Kyle Malo with Robert Bressman (CRA) onsite for sediment confirmation sampling.

0715 Diane R. onsite.

Keith Kidder
7/6/07

7/6/07 - 7/7/07

Cannelton Industries Site Sault Ste. Marie, MI

Weather: Calm Overnight. Low 55°F, slight wind

2255 Keith K. (WESTON) onsite Tannery Bay for WESTON shift change with Andy Kiel. Ken M. (Gannon) onsite.

2305 Andy K. indicated that MCM was located at STA 350. Also, indicated that the bucket on the Manitowoc broke so it was changed out for a smaller bucket. Unloading times are now slower due to smaller bucket size on the Manitowoc crane.

2320 MCM has shuttle Full, ~~Shuttle" being changed out~~ Shuttle will be changed out on the next MCM shift.

2345 MCM shift change.

2355 MCM changing out shuttle, shuttle full from previous shift. Still located at STA 350

035 MCM has empty shuttle tied up to dredge barge.

039 MCM resume dredging activities in Dredge Lane 2.

126 MCM changing out shuttle, shuttle full, located at STA 353.

204 MCM has empty shuttle tied up to dredge barge.

0208 Resume dredging in Dredge Lane 2.

0240 GPS and computer issues with the Hypack / Dredgepack software program. Boom / bucket coordinates and imprint not matching up to previous location. Also DMG ~~number~~ number is not matching up with previous data. Wayne C. (MCM) did not answer calls by MCM working foreman for technical questions.

0300 MCM is taking 1 more cut out of Dredge Lane 2 before moving out of dredge lane to start on the next dredge lane (Dredge Lane 3).

0314 Shuttle full, MCM changing out shuttle.

0343 Link Belt operator indicated that the computer

7/7/07

Cannelton Industries Site Sault Ste. Marie, MI

GPS issue seemed to be resolved. currently, the bucket/boom is located at STA 369. Additionally the bucket imprints now match up to the edge of the dredge limit in Dredge Lane 2.

0351 MCM has empty Shuttle tied up to dredge barge.

0352 Resume dredging in Dredge Lane 2.

0358 Moving dredge barge to the port tow. Dredging stopped.

0400 Resume dredging in Dredge Lane 2.

* 0426 MCM changing out Shuttle, Shuttle full.

0503 MCM has empty Shuttle tied up to dredge barge.

* 0548 MCM changing out Shuttle, Shuttle full

0600 Dredge Lane 2 complete. Computer/GPS shows dredge extents have been met. After Shuttle is changed out, will start to move dredge barge back to get set up in Dredge Lane 3.

0645 MCM Starting to move dredge barge in position for Start of Dredge Lane 3.

0700 MCM have dredge barge close to the required position for Start of Dredge Lane 3. Wayne C. (MCM) will be out at 0730 to confirm position and set new centerline on the computer.

0710 Diane R. (WESTON) Onsite for WESTON Shift change. Diane R. collecting water levels at stilling well and downloading transducer data.

0720 Water Levels

Initial: 35.0" btoc

After: 35.0" btoc

0723 Transducer handed off to Keith R., Keith K. offsite

Kurt Kilde

7/7/07

7/7/07 - 7/8/07

Cannelton Industries Site Sault Ste. Marie, MI
weather: Sunny during the evening, Calm, Calm during the Overnight, Low of 56°F tonight, Slight wind

1900 Keith K. (WESTON) at Tannery Bay for WESTON shift change with Diane R. She indicated that MCM was temporarily down to repair bucket on Link Belt Crane. A spacer/Shiv part was broke. Bob E. (MCM) to MCM shop for parts.

x Also, MCM changing out shuttle, shuttle full.

1905 Most dredge contours in Dredge Lane 3 indicate a dredge depth of 597. It has been discussed between Envirocon and MCM that MCM would attempt to dredge to 597 to meet the design contours. Careful examination of the dredge buckets will be required once the design dredge depths are reached in Dredge Lane 3. Verne M. (Envirocon) onsite rep. for afternoon shift.

2000 MCM continue to work on bucket issues for Link Belt Crane.

2143 Bucket on Link-Belt attached and teeth bolted on. Bucket is ½ yd. round nose digging bucket. Currently located at STA 005 at Dredge Lane 3.

2144 Start dredging

2207 Extension cord for computer/GPS was torn apart, stop dredging to replace cord.

2215 Resume dredging

2220 Moved dredge forward and to the port tow. Silt curtain hung up on bottom of dredge barge.

2222 Backing up dredge barge to fix silt curtain.

2257 Silt curtain fixed, moved dredge barge forward. Located at STA 15. Dredging to 597' MSL.

2315 MCM continues dredging at Dredge Lane 3.

7/7/07- 7/8/07

Cannelton Industries Site Sault Ste. Marie, MI

2330 Stop dredging at Dredge Lane 3 for MCM Shift change. Ken M. (Environcon) onsite at 1050

* 000 MCM changing out Shuttle, shuttle partially full, other empty Shuttle already tied to the side of the shuttle, will start filling when other shuttle is pulled out. Located at STA 19.

009 Empty Shuttle tied up to dredge barge, resume dredging at Dredge Lane 3.

030 MCM continue dredging at Dredge Lane 3. New operator (Mike Poirier) from MCM was informed that the dredge contours were at 597' ANSL throughout most of Dredge Lane 3 and to be careful of overdredging.

* 0118 MCM ~~has~~ shuttle full, changing out shuttle

0145 MCM has empty shuttle tied up to dredge barge.

0150 Resume dredging at Dredging Lane 3. MCM is currently dredging on the Starboard side of the centerline at Dredge Lane 3. Located at STA 23.

0153 Moving to the starboard to dredge sediments in Dredge Lane 3. Several high spots were observed by the crane operator at the boundary between Dredge Lane 2 and Dredge Lane 3.

* 0300 Shuttle full, MCM changing out shuttle

0335 MCM has empty shuttle tied up to dredge barge

0339 Resume dredging in Dredge Lane 3.

0424 Lightning to the North, temporarily stop dredging. Currently located at STA 33. Lightning shut-down

0500 Continue to observe lightning and rain in the area, remain on lightning shutdown

0540 Resume dredging activities in Dredge Lane 3. Lightning stopped at 0510.

7/7/07 - 7/8/07

Cannelton Industries Site Sault Ste. Marie, MI

0545 Stop dredging, computer issue
0600 Resume dredging activities at Dredge Lane 3.
0618 Moved to the port (towards centerline) and Forward. Moved to STA 40.
0620 Resume dredging.
0640 MCM changing out shuttle, shuttle Full.
0700 Keith R. off dredge barge for shift change with Diane R.
0703 Diane R. collecting water levels at the Stilling well and downloading transducer data.
Initial: 42½" btoc
After: 43¼" btoc
0710 Keith K. offsite

Keith Kolde
7/8/07

7/8/07 - 7/9/07

Cannelton Industries Site Sault Ste. Marie, MI
Weather: Scattered T-storms, Rainy. ~~High~~ Low of 58°F
Overnight, Slight Wind.

2300 Keith K. (WESTON) onsite Tannery Bay for WESTON Shift change with Andy Kiel. Andy indicated that MCM was on a weather shut down at shift change (lightning in the very near area). Andy indicated that MCM was located at STA 78 at Dredge Lane 3.

2340 Heading out to dredge barge to start shift.

2350 Temporarily shut down due to lightning. Ken M. (Environ onsite)

000 Continue weather shut-down

020 Continue weather shut-down, Mike P. (MCM) indicated that Dredge Sto is out of fuel.

025 Weather delay over, waiting on MCM personnel to resume dredging activities.

035 MCM changing out shuttles, shuttle full from previous shift.

0100 MCM brought back empty shuttle, did not take other almost full shuttle, MCM getting ready to take fuel out to Dredge Sto.

0115 Deckhand heading out to Dredge Sto to fuel up Manitowoc crane it is out of fuel. Continue to wait for the start of dredging activities.

0124 MCM resume dredging activities in Dredge Lane 3.

0136 MCM crane operator added a few more buckets of sediments to the mostly full shuttle, shuttle now full, stop dredging. Waiting for deckhand to get back to move shuttles. MCM is short a deckhand

0200 MCM changing out shuttle, Empty shuttle pulled over to dredge barge. Manitowoc crane has ½ tank of fuel.

0210 Resume dredging, Deckhand taking the full barge to Dredge Sto for unloading. MCM has been informed of the design dredge depth contours in Dredge Lane 3 of 597'AH.

7/9/07

Cannelton Industries Site Sault Ste. Marie, MI

The MCM crane operator plans to dredge atleast 3.5' to maintain draft requirements in low water.

0230 MCM continues dredging at Dredge Lane 3.

0245 MCM Deckhand getting empty Shuttle at Dredge 56

0318 Shuttle full next to dredge barge, changing out Shuttle, empty Shuttle brought in and tied up to dredge barge

0324 Resume dredging at Dredge Lane 3. Located at STA 90. Starboard Side of centerline.

0410 MCM continue dredging at Dredge Lane 3. Empty shuttle tied up next to shuttle being filled.

0450 Shuttle Full, shuttle being changed out, empty shuttle pulled next to dredge barge

0510 Resume dredging at Dredge Lane 3. Before Start of dredging dredge barge moved to the port to Start next cut in Dredge Lane 3. Located at STA 85 (cut on the port side is slightly farther back than the previous area of dredging hence, the lower STA # from previous).

0520 Crane operator reached out to next cut to give the Station # (STA # 97).

0540 MCM continues dredging activities at Dredge Lane 3.

0600 MCM continues dredging activities at Dredge Lane 3.

0630 MCM changing out Shuttle, Full, pulling empty Shuttle up to dredge barge with crane bucket.

0635 Skip S. (Environcon) onsite to get dredging data from Ken M.

0636 MCM resume dredging activities at Dredge Lane 3.

0650 MCM continues dredging activities at Dredge Lane 3.

0658 Keith K. off dredge barge for WESTON shift change with Diane R.

0705 Diane R. collecting water levels from stilling well Initial: 39" After: 39"

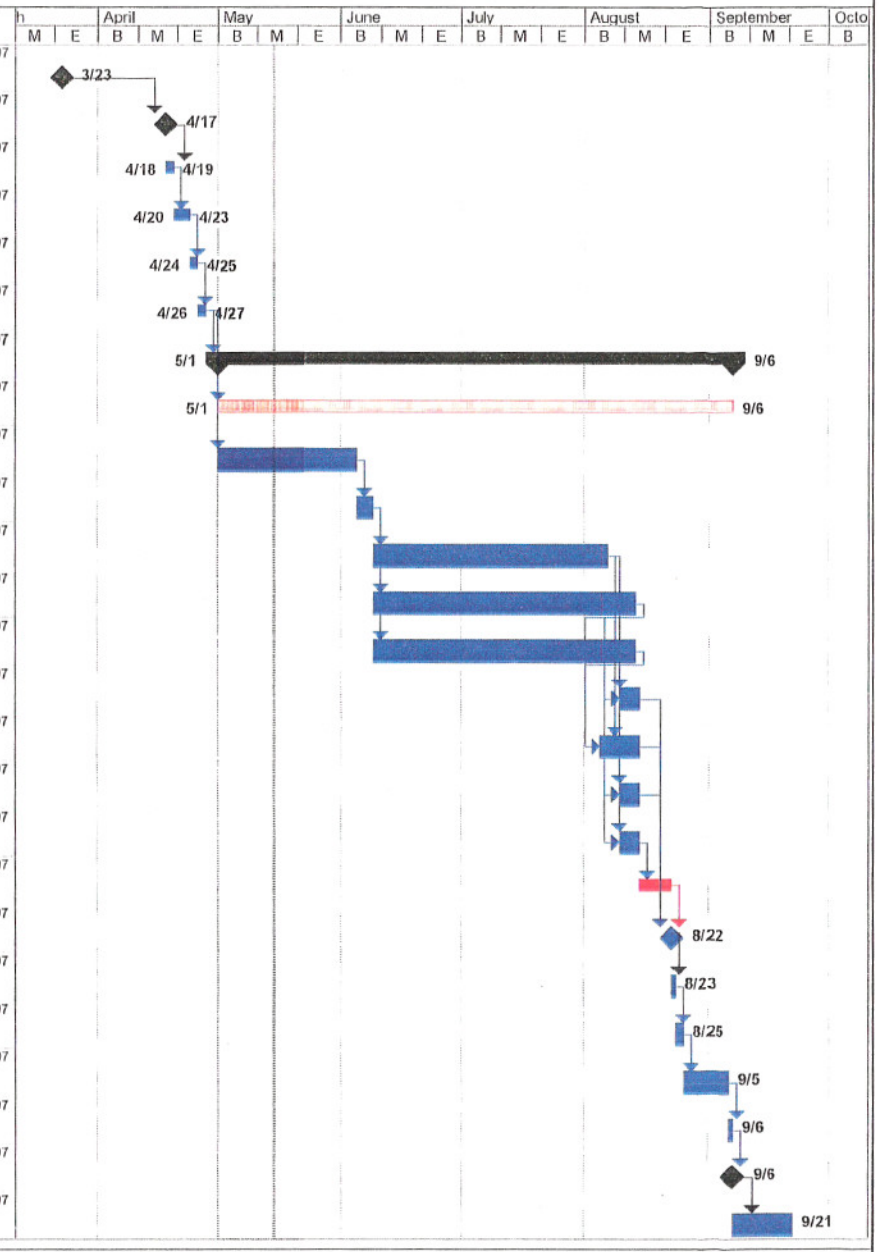
0715 Keith K. offsite 7/9/07

6/7-DAYS PER WEEK - 24-HOURS PER DAY

CANNELTON INDUSTRIES PROJECT - 2007 OPERATIONS PLAN / SHUTTLE APPROACH - ENVIROCON, INC.

Tue 5/15/07 5:53 PM

ID	Task Name	Duration	Start	Finish
1	COMPREHENSIVE RETOOLING PLAN & WORK PLAN MODS.	0 days	Fri 3/23/07	Fri 3/23/07
2	NOTICE TO PROCEED	0 days	Tue 4/17/07	Tue 4/17/07
3	INTERIM REVIEW (#1) / (MODIFICATIONS) / FABRICATION	2 days	Wed 4/18/07	Thu 4/19/07
4	INTERIM REVIEW (#2) / (MODIFICATIONS?) / FABRICATION	2 days	Fri 4/20/07	Mon 4/23/07
5	INTERIM REVIEW (#3) / (MODIFICATIONS?) / FABRICATION	2 days	Tue 4/24/07	Wed 4/25/07
6	INTERIM REVIEW (#4) / (MODIFICATIONS?) / FABRICATION	2 days	Thu 4/26/07	Fri 4/27/07
7	ON-SITE 2007 SEDIMENT WORK - CANNELTON IND. PROJECT	118 days	Tue 5/1/07	Thu 9/6/07
8	ON-SITE HEALTH & SAFETY ACTIVITIES	118 days	Tue 5/1/07	Thu 9/6/07
9	REMOBILIZATION and SITE/PROJECT SET-UP - TURBIDITY CONTROLS / SURVEY WORK / HAUL ROAD(S) CONSTRUCTION	29 days	Tue 5/1/07	Mon 6/4/07
10	ACCESS DREDGING	4 days	Tue 6/5/07	Fri 6/8/07
11	07 SEDIMENT REMOVAL WORK (6/7-days / 24-hours)	54 days	Sat 6/9/07	Mon 8/6/07
12	07 SEDIMENT DEWATERING/LOAD-OUT (7-days / 24-hours)	61 days	Sat 6/9/07	Mon 8/13/07
13	07 WATER TREATMENT (7-days / 24-hours)	61 days	Sat 6/9/07	Mon 8/13/07
14	TOPSOIL	5 days	Fri 8/10/07	Tue 8/14/07
15	SLOPE EROSION PROTECTION INSTALLATION	10 days	Sun 8/5/07	Tue 8/14/07
16	SECONDARY SHORELINE PROTECTION	5 days	Fri 8/10/07	Tue 8/14/07
17	HYDRAULIC SEEDING and MULCHING	5 days	Fri 8/10/07	Tue 8/14/07
18	SUBSTANTIAL COMPLETION CONTINGENCY (additional 8-days if needed)	8 days	Wed 8/15/07	Wed 8/22/07
19	SUBSTANTIAL COMPLETION	0 days	Wed 8/22/07	Wed 8/22/07
20	PRE-FINAL INSPECTION	1 day	Thu 8/23/07	Thu 8/23/07
21	PUNCH-LIST COMPLETION	2 days	Fri 8/24/07	Sat 8/25/07
22	07 SITE CLEAN-UP / TEARDOWN / DEMOBE	11 days	Sun 8/26/07	Wed 9/5/07
23	FINAL INSPECTION	1 day	Thu 9/6/07	Thu 9/6/07
24	PROJECT COMPLETION	0 days	Thu 9/6/07	Thu 9/6/07
25	PROJECT CLOSE-OUT PAPERWORK/DOCUMENTATION	15 days	Fri 9/7/07	Fri 9/21/07



Project: CANNELTON - 2007
Date: Tue 5/15/07

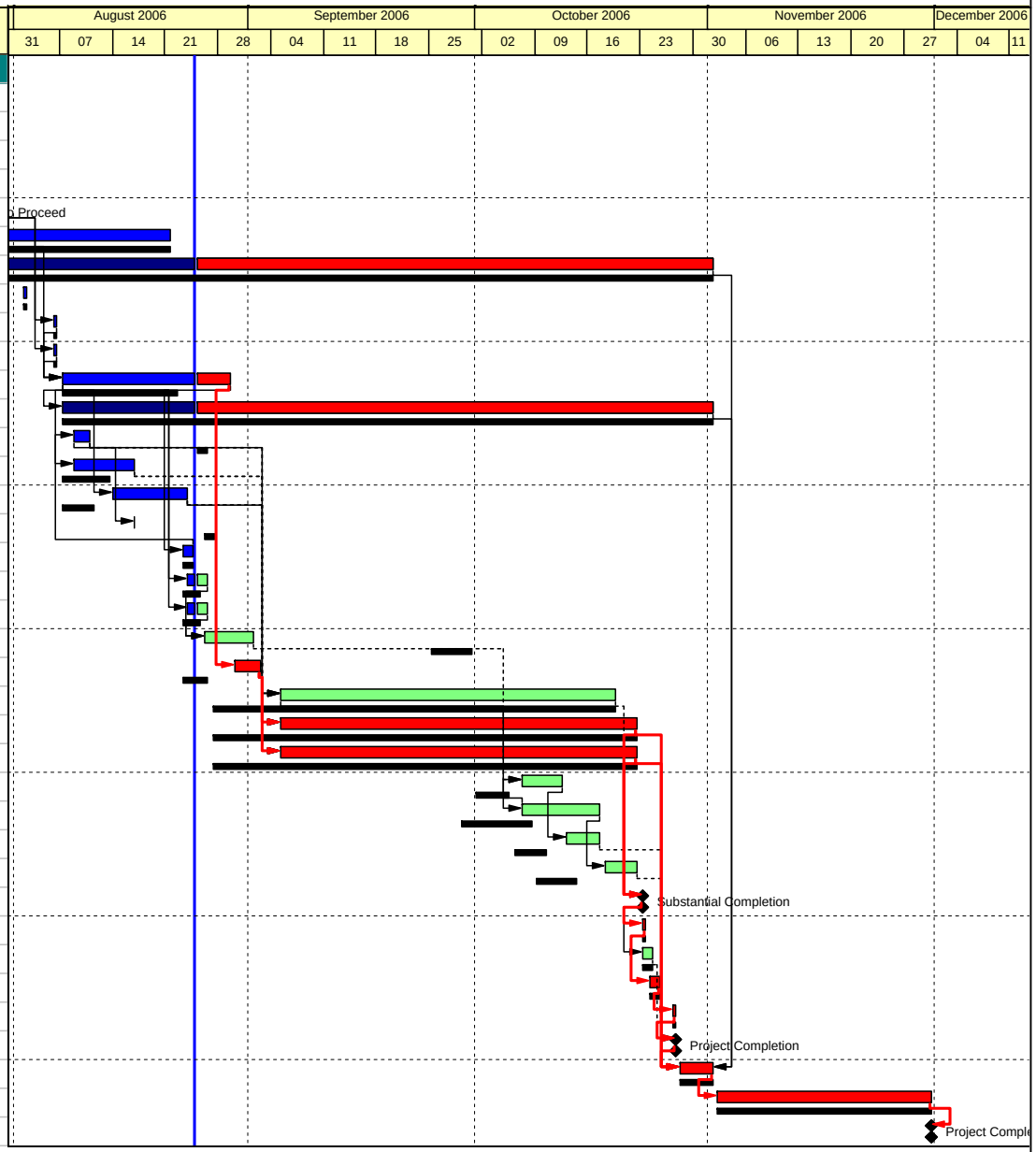
Task		Milestone		External Tasks	
Split		Summary		External Milestone	
Progress		Project Summary		Deadline	

SCHEDULE INCLUDES (6) WEATHER DAYS / 6,631 CY's OF OVER-DREDGE & ACCESS MATERIAL / 686 CY's PER DAY / WATER ELEVATION 599.5

Schedule Reflects The Ability to Work 24 Hrs/Day-7 Days/Wk

Envirocon, Inc. - Providing Safe, Quality and Cost Effective Environmental Construction Services

Act ID	Activity Name	Org Dur	Rem Dur	Dur % Comp	Phy % Comp	Start	Finish
	CANNELTON IND. 06 SEDIMENT WORK	149	90	39.6%		25-May-06 A	30-Nov-06
1	Revised Proposal Pricing	0	0	100%	100%	25-May-06 A	
31	Notice of Award	0	0	100%	100%	22-Jun-06 A	
41	Envirocon / Weston Contract Execution	7	0	100%	100%	23-Jun-06 A	05-Jul-06 A
51	Execution of Envirocon Subcontracting	7	0	100%	100%	06-Jul-06 A	17-Jul-06 A
3	Notice to Proceed	0	0	100%	100%	23-Jul-06 A	
6	Plan Submittal Preparation - Approval	26	0	100%	100%	24-Jul-06 A	21-Aug-06 A
7	2006 SEDIMENT WORK - SUMMARY	93	64	31.18%	0%	24-Jul-06 A	01-Nov-06
60	Pre-construction Meeting	1	0	100%	100%	02-Aug-06 A	02-Aug-06 A
33	Bonds	1	0	100%	100%	06-Aug-06 A	06-Aug-06 A
34	Insurance	1	0	100%	100%	06-Aug-06 A	06-Aug-06 A
8	Mobilization / Project Startup / Training	15	5	66.67%	0%	07-Aug-06 A	29-Aug-06
36	Health & Safety	81	64	20.99%	0%	07-Aug-06 A	01-Nov-06
37	Personnel Hygiene / Decontamination Facility	2	0	100%	100%	09-Aug-06 A	11-Aug-06 A
35	Additional Storage Pad	7	0	100%	100%	09-Aug-06 A	17-Aug-06 A
40	Surveying	5	0	100%	100%	14-Aug-06 A	24-Aug-06 A
38	Equipment Decontamination Faility	2	0	100%	100%	17-Aug-06 A	17-Aug-06 A
10	Site / Equipment / Security Setup	2	0	100%	100%	23-Aug-06 A	24-Aug-06 A
9	Erosion Control Setup / Site Clearing	3	2	33.33%	0%	24-Aug-06 A	26-Aug-06
39	Access Road	3	2	33.33%	0%	24-Aug-06 A	26-Aug-06
14	Wetland Soil Loadout/Removal	7	7	0%	0%	26-Aug-06	01-Sep-06
44	Floating Silt Curtain	4	4	0%	0%	30-Aug-06	02-Sep-06
11	Sediment Removal (Dredging)	42	42	0%	0%	05-Sep-06	19-Oct-06
12	Sediment Dewatering	45	45	0%	0%	05-Sep-06	22-Oct-06
13	Water Treatment	45	45	0%	0%	05-Sep-06	22-Oct-06
42	Topsoil	5	5	0%	0%	07-Oct-06	12-Oct-06
15	Slope Erosion Protection Installation	10	10	0%	0%	07-Oct-06	17-Oct-06
46	Hydraulic Seeding and Mulching	5	5	0%	0%	13-Oct-06	17-Oct-06
45	Secondary Shoreline Protection	5	5	0%	0%	18-Oct-06	22-Oct-06
16	Substantial Completion	0	0	0%	0%	23-Oct-06	
17	Pre-Final Inspection	1	1	0%	0%	23-Oct-06	23-Oct-06
43	Daily Dredging	2	2	0%	0%	23-Oct-06	24-Oct-06
18	Punchlist Completion	2	2	0%	0%	24-Oct-06	25-Oct-06
19	Final Inspection	1	1	0%	0%	27-Oct-06	27-Oct-06
20	Project Completion	0	0	0%	0%		27-Oct-06
21	Site Cleanup / Teardown / Demobilization	5	5	0%	0%	28-Oct-06	01-Nov-06
22	Project Closeout Paperwork	26	26	0%	0%	02-Nov-06	30-Nov-06
32	Project Complete	0	0	0%	0%		30-Nov-06



- Remaining Level of Effort
- Critical LOE
- Actual Level of Effort
- Actual Work
- Remaining Work
- Critical Remaining Work

Page 1 of 1 Layout: CANNELTON - Sub
Project ID: 9DCAN06

Data Date:25-Aug-06 Run Date:24-Aug-06

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Envirocon, Inc.

CANNELTON IND. 06 SEDIMENT WORK

90 Days

Date	Revision	Check...	Appro...
14-Jul-05	DRAFT		
15-Jul-05	Proposal		
08-Sep-05	Contract		
22-Sep-05	2006		
01-May-06	Revised ...		

ENVIROCON

Weston Solutions, Inc.
Suite 500
750 East Bunker Court
Vernon Hills, IL 60061-1865
847-918-4000 • Fax 847-918-4055
www.westonsolutions.com

26 September 2006

Mr. Bruce Van Otteren
Michigan Department of Environmental Quality
Remediation and Redevelopment Division
525 W. Allegan Street, 3rd Floor
Lansing, MI 48909

U.S. EPA Contract No.: 68-W7-0026
Work Assignment No.: 246-RARA-058R
Document Control No.: RFW246-3A-AWBT

Re: Dredged Sand Disposal Analytical Results
Tannery Bay/St. Marys River Sediment Remediation Project
Sault Ste. Marie, Michigan

Dear Mr. Van Otteren:

Weston Solutions, Inc. (WESTON®), on behalf of the United States Environmental Protection Agency (U.S. EPA), is pleased to provide the Michigan Department of Environmental Quality (MDEQ) with the dredged sand disposal analytical results. As you are aware, WESTON collected samples of sand for sieve and site-specific metals analyses to prepare for disposal of the sand as part of the work being performed at the Tannery Bay/St. Marys River Sediment Remediation Project in Sault Ste. Marie, Michigan. The sand that has been sampled to date has been dredged for access to Tannery Bay and is known to be outside of the Area of Concern. WESTON collected six grab samples for geotechnical analysis (SS-4093-092006-SM-001 through SS-4093-092006-SM-006) and one 10-point composite sample for site-specific metals analysis (SS-4093-092006-SM-007) from approximately 1,000 cubic yards of stockpiled dredged sand. Samples were placed on ice and shipped under chain of custody by overnight courier to STL North Canton laboratory in North Canton, Ohio (site-specific metals analysis) and Conestoga-Rovers & Associates in Plymouth, Michigan (geotechnical analysis). Please find attached the analytical results and chain of custodies for the samples collected on 20 September 2006.

WESTON evaluated the sieve analysis results of grab samples to the criteria for unlimited use as presented in Michigan Department of Environmental Quality (MDEQ) Administrative Rules for Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The Rule states that sediments that are not from an Area of Concern and that are 95 percent retained on a 200 mesh screen are acceptable for all uses. Sieve analysis results from the six grab samples of dredged sand indicate that 97% or more of the material was retained; and therefore, acceptable for all uses.

an employee-owned company
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As a contingency, WESTON also compared the analytical results for site-specific metals (arsenic, cadmium, chromium, lead, and mercury) in a composite sample of dredged sand to the MDEQ Administrative Rules for Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The Rule offers screening criteria for cleanup of residential/commercial soils based on exposure pathways and remediation objectives. Laboratory results indicate that concentrations of arsenic, cadmium, mercury, and lead in the sample are below state background levels, as well as the most conservative soil remediation objectives presented for each metal in Operational Memorandum 1, Attachment 1, Table 2 for Residential/Commercial soils. The concentration of chromium in the sample was below the most conservative soil remediation objective in the same table (particulate soil inhalation criteria) for residential properties.

Based on the evaluation presented above, sand dredged for access to Tannery Bay may be re-used at an upland location. As work continues at the Tannery Bay/St. Marys River Sediment Remediation Project, contaminated sediments dredged from the Area of Concern will be segregated, de-watered, and transported off site for disposal at Dafters Landfill.

If you have any questions or require additional information, please feel free to contact me at (847) 918-4039.

Very truly yours,

WESTON SOLUTIONS, INC.

James M. Burton

James M. Burton, P.E.
Site Manager

cc: M. Tuchman, GLNPO U.S. EPA
S. Linebaugh, U.S. EPA
D. Johnson, Phelps-Dodge
R. Bressan, CRA
P. Davidson, Envirocon
R. Conroy, MDEQ
Chris Lantinga, WESTON
Site files

Attachments:
A Laboratory Data Packages
B Sample Chains of Custody

This document was prepared by Weston Solutions, Inc. expressly for U.S. EPA. It shall not be released or disclosed in whole or in part without the express, written permission of U.S. EPA.

ATTACHMENT A

LABORATORY DATA PACKAGES

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-001 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 491.6 g
Weight after washing: 489.9 g
Loss by wash: 1.7 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	0.0	0.0%	100.0%
	#40	25.3	5.1%	94.9%
	#50	11.2	2.3%	92.6%
	#100	376.4	76.6%	16.0%
	#200	73.6	15.0%	1.0%
	pan	3.4	1.0%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT		
CAN No:	PTW	
Soil wet + Tare	628.8	
Soil dry + Tare	505.8	
Weight water	123	
Tare	14.2	
Weight dry soil	491.6	
W%	25.02	

$$P\% = \frac{(R - \delta R)\,a}{Ms} \times 100$$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R'
Dr = ☐ measured ☐ estimated
a =

DISPERSING AGENT:
CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-002 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 514.1 g
Weight after washing: 509.9 g
Loss by wash: 4.2 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	0.1	0.0%	100.0%
	#40	221.3	43.0%	56.9%
	#50	11.4	2.2%	54.7%
	#100	224.6	43.7%	11.0%
	#200	51.2	10.0%	1.1%
	pan	1.4	1.1%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT		
CAN No:	PTXXX	
Soil wet + Tare	657.8	
Soil dry + Tare	528.3	
Weight water	129.5	
Tare	14.2	
Weight dry soil	514.1	
W%	25.19	

$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$

$Dmm = K\sqrt{L/T}$ L is function of (R + meniscus) R'

Dr = ☐ measured ☐ estimated

a =

DISPERSING AGENT:

CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-003 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 774 g
Weight after washing: 771.8 g
Loss by wash: 2.2 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	0.1	0.0%	100.0%
	#40	323.8	41.8%	58.2%
	#50	32.9	4.3%	53.9%
	#100	342.5	44.3%	9.7%
	#200	71.3	9.2%	0.4%
	pan	1.2	0.4%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT		
CAN No:	CAT	
Soil wet + Tare	1003	
Soil dry + Tare	788.4	
Weight water	214.8	
Tare	14.4	
Weight dry soil	774	
W%	27.75	

$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R'

Dr = ☐ measured ☐ estimated

a =

DISPERSING AGENT:

CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-004 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 595.1 g
Weight after washing: 589.4 g
Loss by wash: 5.7 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	1.0	0.2%	99.8%
	#40	132.5	22.3%	77.6%
	#50	106.4	17.9%	59.7%
	#100	316.7	53.2%	6.5%
	#200	31.9	5.4%	1.1%
	pan	0.9	1.1%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT		
CAN No:	PT13	
Soil wet + Tare	755.9	
Soil dry + Tare	611.7	
Weight water	144.2	
Tare	16.6	
Weight dry soil	595.1	
W%	24.23	

$$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R¹
Dr = ☐ measured ☐ estimated
a =

DISPERSING AGENT:
CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-005 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 788.8 g
Weight after washing: 782.2 g
Loss by wash: 6.6 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.1	0.0%	100.0%
	#16	1.2	0.2%	99.8%
	#40	135.6	17.2%	82.6%
	#50	225.3	28.6%	54.1%
	#100	385.3	48.8%	5.2%
	#200	32.5	4.1%	1.1%
	pan	2.3	1.1%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT		
CAN No:	PT6	
Soil wet + Tare	1063	
Soil dry + Tare	805.2	
Weight water	257.7	
Tare	16.4	
Weight dry soil	788.8	
W%	32.67	

$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R¹
Dr = ☐ measured ☐ estimated
a =

DISPERSING AGENT:
CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner MCM DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-006 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 685.3 g
Weight after washing: 668.6 g
Loss by wash: 16.7 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	1.5	0.2%	99.8%
	#40	276.1	40.3%	59.5%
	#50	111.2	16.2%	43.3%
	#100	227.1	33.1%	10.1%
	#200	49.5	7.2%	2.9%
	pan	3.2	2.9%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT		
CAN No:	PT10	
Soil wet + Tare	862.6	
Soil dry + Tare	701.8	
Weight water	160.8	
Tare	16.5	
Weight dry soil	685.3	
W%	23.46	

$$P\% = \frac{(R - \delta R)\,a}{Ms} \times 100$$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R[1]
Dr = ☐ measured ☐ estimated
a =

DISPERSING AGENT:
CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

ANALYTICAL REPORT

CANNELTON

Lot #: A6I210149

Paul Wiseman (PM)

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

Denise D. Heckler
Project Manager

September 22, 2006

EXECUTIVE SUMMARY - Detection Highlights

A6I210149

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-092006-SM-007 09/20/06 14:15	**001**			
Mercury	0.048	0.041	mg/kg	SW846 7471A
Arsenic	1.9	0.62	mg/kg	SW846 6010B
Cadmium	0.10 B	0.12	mg/kg	SW846 6010B
Chromium	342 J	0.62	mg/kg	SW846 6010B
Lead	7.8	0.37	mg/kg	SW846 6010B
Percent Solids	80.6	10.0	%	MCAWW 160.3 MOD

ANALYTICAL METHODS SUMMARY

A6I210149

PARAMETER	ANALYTICAL METHOD
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A
Total Residue as Percent Solids	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A6I210149

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JEPT4	001	SS-4093-092006-SM-007	09/20/06	14:15

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-092006-SM-007

TOTAL Metals

Lot-Sample #...: A6I210149-001 Matrix.....: SO
Date Sampled...: 09/20/06 14:15 Date Received...: 09/21/06
% Moisture.....: 19

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6264246						
Arsenic	1.9	0.62	mg/kg	SW846 6010B	09/21/06	JHPT41AC
		Dilution Factor: 1		MDL.....: 0.42		
Cadmium	0.10 B	0.12	mg/kg	SW846 6010B	09/21/06	JHPT41AD
		Dilution Factor: 1		MDL.....: 0.033		
Chromium	342 J	0.62	mg/kg	SW846 6010B	09/21/06	JHPT41AE
		Dilution Factor: 1		MDL.....: 0.16		
Mercury	0.048	0.041	mg/kg	SW846 7471A	09/21-09/22/06	JHPT41AG
		Dilution Factor: 1		MDL.....: 0.016		
Lead	7.8	0.37	mg/kg	SW846 6010B	09/21/06	JHPT41AF
		Dilution Factor: 1		MDL.....: 0.30		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-092006-SM-007

General Chemistry

Lot-Sample #...: A6I210149-001 **Work Order #....:** JEPT4 **Matrix.....:** SO
Date Sampled...: 09/20/06 14:15 **Date Received...:** 09/21/06
% Moisture.....: 19

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	80.6	10.0	%	MCAWW 160.3 MOD	09/21-09/22/06	6264377

Dilution Factor: 1 MDL.....: 10.0

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A6I210149 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A6I210000-246 Prep Batch #....: 6264246						
Arsenic	ND	0.50	mg/kg	SW846 6010B	09/21/06	JEP071AA
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/kg	SW846 6010B	09/21/06	JEP071AC
		Dilution Factor: 1				
Chromium	0.15 B	0.50	**mg/kg**	SW846 6010B	09/21/06	JEP071AD
		Dilution Factor: 1				
Lead	ND	0.30	mg/kg	SW846 6010B	09/21/06	JEP071AE
		Dilution Factor: 1				
Mercury	ND	0.033	mg/kg	SW846 7471A	09/21-09/22/06	JEP071AF
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A6I210149 Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A6I210000-246 Prep Batch #...:: 6264246							
Arsenic	200	170	mg/kg	85	SW846 6010B	09/21/06	JEP071AG
			Dilution Factor: 1				
Cadmium	5.0	4.4	mg/kg	88	SW846 6010B	09/21/06	JEP071AH
			Dilution Factor: 1				
Chromium	20.0	17.3	mg/kg	87	SW846 6010B	09/21/06	JEP071AJ
			Dilution Factor: 1				
Lead	50.0	43.6	mg/kg	87	SW846 6010B	09/21/06	JEP071AK
			Dilution Factor: 1				
Mercury	0.83	0.76	mg/kg	91	SW846 7471A	09/21-09/22/06	JEP071AL
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A6I210149 Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A6I210000-246 Prep Batch #...: 6264246					
Arsenic	85	(80 - 120)	SW846 6010B	09/21/06	JEP071AG
		Dilution Factor: 1			
Cadmium	88	(80 - 120)	SW846 6010B	09/21/06	JEP071AH
		Dilution Factor: 1			
Chromium	87	(80 - 120)	SW846 6010B	09/21/06	JEP071AJ
		Dilution Factor: 1			
Lead	87	(80 - 120)	SW846 6010B	09/21/06	JEP071AK
		Dilution Factor: 1			
Mercury	91	(73 - 123)	SW846 7471A	09/21-09/22/06	JEP071AL
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A6I210149 Matrix.....: SO
Date Sampled...: 09/20/06 14:15 Date Received...:: 09/21/06

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A6I210149-001 Prep Batch #.....:: 6264246									
Arsenic									
	1.9	248	203	mg/kg	81		SW846 6010B	09/21/06	JEPT41AH
	1.9	248	207	mg/kg	83	1.9	SW846 6010B	09/21/06	JEPT41AJ
			Dilution Factor: 1						
Cadmium									
	0.10	6.2	5.2	mg/kg	82		SW846 6010B	09/21/06	JEPT41AK
	0.10	6.2	5.3	mg/kg	83	1.6	SW846 6010B	09/21/06	JEPT41AL
			Dilution Factor: 1						
Chromium									
	342	24.8	309	mg/kg			SW846 6010B	09/21/06	JEPT41AM
			Qualifiers: NC,MSB						
	342	24.8	370	mg/kg			SW846 6010B	09/21/06	JEPT41AN
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
Lead									
	7.8	62.0	55.3	mg/kg	77		SW846 6010B	09/21/06	JEPT41AP
	7.8	62.0	59.6	mg/kg	84	7.5	SW846 6010B	09/21/06	JEPT41AQ
			Dilution Factor: 1						
Mercury									
	0.048	0.21	0.20	mg/kg	73		SW846 7471A	09/21-09/22/06	JEPT41AR
	0.048	0.21	0.22	mg/kg	83	10	SW846 7471A	09/21-09/22/06	JEPT41AT
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A6I210149 Matrix.....: SO
Date Sampled...: 09/20/06 14:15 Date Received...:: 09/21/06

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A6I210149-001 Prep Batch #....:: 6264246							
Arsenic	81	(75 - 125)			SW846 6010B	09/21/06	JEPT41AH
	83	(75 - 125)	1.9	(0-20)	SW846 6010B	09/21/06	JEPT41AJ
		Dilution Factor: 1					
Cadmium	82	(75 - 125)			SW846 6010B	09/21/06	JEPT41AK
	83	(75 - 125)	1.6	(0-20)	SW846 6010B	09/21/06	JEPT41AL
		Dilution Factor: 1					
Chromium	NC,MSB	(75 - 125)			SW846 6010B	09/21/06	JEPT41AM
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	09/21/06	JEPT41AN
		Dilution Factor: 1					
Lead	77	(75 - 125)			SW846 6010B	09/21/06	JEPT41AP
	84	(75 - 125)	7.5	(0-20)	SW846 6010B	09/21/06	JEPT41AQ
		Dilution Factor: 1					
Mercury	73	(10 - 199)			SW846 7471A	09/21-09/22/06	JEPT41AR
	83	(10 - 199)	10	(0-50)	SW846 7471A	09/21-09/22/06	JEPT41AT
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A6I210149 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #: JEWD91AA		MB Lot-Sample #: A6I210000-377		
	ND	10.0	%	MCAWW 160.3 MOD	09/21-09/22/06	6264377
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A6I210149 Work Order #....:: JED47-SMP Matrix.....:: SOLID
JED47-DUP
Date Sampled...: 09/14/06 09:30 Date Received...:: 09/15/06
% Moisture.....: 20

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A6I150244-003		
	79.9	80.0	%	0.12	(0-20)	MCAWW 160.3 MOD	09/21-09/22/06	6264377

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A6I210149 Work Order #....:: JED5R-SMP Matrix.....:: SOLID
JED5R-DUP

Date Sampled...: 09/14/06 Date Received...:: 09/15/06

% Moisture.....: 12

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A6I150244-010		
	88.2	85.7	%	2.9	(0-20)	MCAWW 160.3 MOD	09/21-09/22/06	6264377

Dilution Factor: 1

ATTACHMENT B

SAMPLE CHAIN OF CUSTODY

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

ID # № D 1184

SSOW Ref. Code:

Required Client Information:

Company: CRA, Inc.	Report To:
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name:
Fax: 734-453-5201	Project Number:
Email:	

Laboratory:	
Laboratory Location:	
Laboratory Contact:	
Requested Due Date:	TAT:
QA/QC Requirements:	

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

Analysis and Method

Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	[illegible]									Remarks/Lab ID
1. SS-4013-[illegible]-SO-001	SE	[illegible]	[illegible]	1	X					X	X									
2. SS-4013-[illegible]-SO-002	SE	[illegible]	[illegible]	1	X					X	X									
3. SS-4013-[illegible]-SO-003	SE	[illegible]	[illegible]	1	X					X	X									
4. SS-4013-[illegible]-SO-004	SE	[illegible]	[illegible]	1	X					X	X									
5. SS-4013-[illegible]-SO-005	SE	[illegible]	[illegible]	1	X					X	X									
6. SS-4013-[illegible]-SO-006	SE	[illegible]	[illegible]	1	X					X	X									
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
13.																				
14.																				
15.																				
TOTAL NUMBER OF CONTAINERS																				

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
HAND	1	[illegible]	[illegible]	[illegible]	[illegible]		
AIRBILL NO. 8371 5241 [illegible]							

Sample Condition

Temp in C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: [illegible]

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 9 (8-94)

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

ID # Nº D 2055

SSOW Ref. Code:

Required Client Information:

Company: CRA, Inc.	Report To:
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To:
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name:
Fax: 734-453-5201	Project Number:
Email:	

Laboratory:	
Laboratory Location:	
Laboratory Contact:	
Requested Due Date:	TAT:
QA/QC Requirements:	

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

Analysis and Method

Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Preservative: Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:											Remarks/Lab ID
1.																					
2.																					
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
12.																					
13.																					
14.																					
15.																					
TOTAL NUMBER OF CONTAINERS																					

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
AIRBILL NO.							

Sample Condition

Temp in C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name:

Sampler Signature: Date:

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 016 041

ANALYTICAL REPORT

CANNELTON

Lot #: A6I210149

Paul Wiseman (PM)

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

Denise D. Heckler
Project Manager

September 22, 2006

EXECUTIVE SUMMARY - Detection Highlights

A6I210149

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-092006-SM-007 09/20/06 14:15	**001**			
Mercury	0.048	0.041	mg/kg	SW846 7471A
Arsenic	1.9	0.62	mg/kg	SW846 6010B
Cadmium	0.10 B	0.12	mg/kg	SW846 6010B
Chromium	342 J	0.62	mg/kg	SW846 6010B
Lead	7.8	0.37	mg/kg	SW846 6010B
Percent Solids	80.6	10.0	%	MCAWW 160.3 MOD

ANALYTICAL METHODS SUMMARY

A6I210149

PARAMETER	ANALYTICAL METHOD
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A
Total Residue as Percent Solids	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A6I210149

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JEPT4	001	SS-4093-092006-SM-007	09/20/06	14:15

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-092006-SM-007

TOTAL Metals

Lot-Sample #...: A6I210149-001 **Matrix.....:** SO
Date Sampled...: 09/20/06 14:15 **Date Received..:** 09/21/06
% Moisture.....: 19

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6264246						
Arsenic	**1.9**	**0.62**	**mg/kg**	**SW846 6010B**	**09/21/06**	**JEPT41AC**
		Dilution Factor: 1		MDL.....: 0.42		
Cadmium	**0.10 B**	**0.12**	**mg/kg**	**SW846 6010B**	**09/21/06**	**JEPT41AD**
		Dilution Factor: 1		MDL.....: 0.033		
Chromium	**342 J**	**0.62**	**mg/kg**	**SW846 6010B**	**09/21/06**	**JEPT41AE**
		Dilution Factor: 1		MDL.....: 0.16		
Mercury	**0.048**	**0.041**	**mg/kg**	**SW846 7471A**	**09/21-09/22/06**	**JEPT41AG**
		Dilution Factor: 1		MDL.....: 0.016		
Lead	**7.8**	**0.37**	**mg/kg**	**SW846 6010B**	**09/21/06**	**JEPT41AF**
		Dilution Factor: 1		MDL.....: 0.30		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-092006-SM-007

General Chemistry

Lot-Sample #...: A6I210149-001 **Work Order #...:** JEPT4 **Matrix.....:** SO
Date Sampled...: 09/20/06 14:15 **Date Received..:** 09/21/06
% Moisture.....: 19

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**80.6**	**10.0**	**%**	**MCAWW 160.3 MOD**	**09/21-09/22/06**	**6264377**

Dilution Factor: 1 MDL.....: 10.0

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A6I210149 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A6I210000-246 **Prep Batch #...:** 6264246						
Arsenic	ND	0.50	mg/kg	SW846 6010B	09/21/06	JEP071AA
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/kg	SW846 6010B	09/21/06	JEP071AC
		Dilution Factor: 1				
Chromium	**0.15 B**	**0.50**	**mg/kg**	**SW846 6010B**	**09/21/06**	**JEP071AD**
		Dilution Factor: 1				
Lead	ND	0.30	mg/kg	SW846 6010B	09/21/06	JEP071AE
		Dilution Factor: 1				
Mercury	ND	0.033	mg/kg	SW846 7471A	09/21-09/22/06	JEP071AF
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A6I210149 **Matrix.....:** SOLID

LCS Lot-Sample#: A6I210000-246 **Prep Batch #...:** 6264246

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Arsenic	200	170	mg/kg	85	SW846 6010B	09/21/06	JEP071AG
			Dilution Factor: 1				
Cadmium	5.0	4.4	mg/kg	88	SW846 6010B	09/21/06	JEP071AH
			Dilution Factor: 1				
Chromium	20.0	17.3	mg/kg	87	SW846 6010B	09/21/06	JEP071AJ
			Dilution Factor: 1				
Lead	50.0	43.6	mg/kg	87	SW846 6010B	09/21/06	JEP071AK
			Dilution Factor: 1				
Mercury	0.83	0.76	mg/kg	91	SW846 7471A	09/21-09/22/06	JEP071AL
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A6I210149 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A6I210000-246 **Prep Batch #...:** 6264246					
Arsenic	85	(80 - 120)	SW846 6010B	09/21/06	JEP071AG
		Dilution Factor: 1			
Cadmium	88	(80 - 120)	SW846 6010B	09/21/06	JEP071AH
		Dilution Factor: 1			
Chromium	87	(80 - 120)	SW846 6010B	09/21/06	JEP071AJ
		Dilution Factor: 1			
Lead	87	(80 - 120)	SW846 6010B	09/21/06	JEP071AK
		Dilution Factor: 1			
Mercury	91	(73 - 123)	SW846 7471A	09/21-09/22/06	JEP071AL
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A6I210149 **Matrix.....:** SO
Date Sampled...: 09/20/06 14:15 **Date Received..:** 09/21/06

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A6I210149-001 **Prep Batch #...:** 6264246									
Arsenic									
	1.9	248	203	mg/kg	81		SW846 6010B	09/21/06	JEPT41AH
	1.9	248	207	mg/kg	83	1.9	SW846 6010B	09/21/06	JEPT41AJ
			Dilution Factor: 1						
Cadmium									
	0.10	6.2	5.2	mg/kg	82		SW846 6010B	09/21/06	JEPT41AK
	0.10	6.2	5.3	mg/kg	83	1.6	SW846 6010B	09/21/06	JEPT41AL
			Dilution Factor: 1						
Chromium									
	342	24.8	309	mg/kg			SW846 6010B	09/21/06	JEPT41AM
			Qualifiers: NC,MSB						
	342	24.8	370	mg/kg			SW846 6010B	09/21/06	JEPT41AN
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
Lead									
	7.8	62.0	55.3	mg/kg	77		SW846 6010B	09/21/06	JEPT41AP
	7.8	62.0	59.6	mg/kg	84	7.5	SW846 6010B	09/21/06	JEPT41AQ
			Dilution Factor: 1						
Mercury									
	0.048	0.21	0.20	mg/kg	73		SW846 7471A	09/21-09/22/06	JEPT41AR
	0.048	0.21	0.22	mg/kg	83	10	SW846 7471A	09/21-09/22/06	JEPT41AT
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A6I210149 **Matrix.....:** SO
Date Sampled...: 09/20/06 14:15 **Date Received..:** 09/21/06

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A6I210149-001 **Prep Batch #...:** 6264246							
Arsenic	81	(75 - 125)			SW846 6010B	09/21/06	JEPT41AH
	83	(75 - 125)	1.9	(0-20)	SW846 6010B	09/21/06	JEPT41AJ
		Dilution Factor: 1					
Cadmium	82	(75 - 125)			SW846 6010B	09/21/06	JEPT41AK
	83	(75 - 125)	1.6	(0-20)	SW846 6010B	09/21/06	JEPT41AL
		Dilution Factor: 1					
Chromium	NC,MSB	(75 - 125)			SW846 6010B	09/21/06	JEPT41AM
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	09/21/06	JEPT41AN
		Dilution Factor: 1					
Lead	77	(75 - 125)			SW846 6010B	09/21/06	JEPT41AP
	84	(75 - 125)	7.5	(0-20)	SW846 6010B	09/21/06	JEPT41AQ
		Dilution Factor: 1					
Mercury	73	(10 - 199)			SW846 7471A	09/21-09/22/06	JEPT41AR
	83	(10 - 199)	10	(0-50)	SW846 7471A	09/21-09/22/06	JEPT41AT
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A6I210149 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #: JEWD91AA		MB Lot-Sample #:	A6I210000-377	
	ND	10.0	%	MCAWW 160.3 MOD	09/21-09/22/06	6264377
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A6I210149 **Work Order #...:** JED47-SMP **Matrix.....:** SOLID
JED47-DUP
Date Sampled...: 09/14/06 09:30 **Date Received..:** 09/15/06
% Moisture.....: 20

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A6I150244-003		
	79.9	80.0	%	0.12	(0-20)	MCAWW 160.3 MOD	09/21-09/22/06	6264377

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A6I210149 **Work Order #...:** JED5R-SMP JED5R-DUP **Matrix.....:** SOLID

Date Sampled...: 09/14/06 **Date Received..:** 09/15/06

% Moisture.....: 12

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A6I150244-010		
	88.2	85.7	%	2.9	(0-20)	MCAWW 160.3 MOD	09/21-09/22/06	6264377

Dilution Factor: 1

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-001 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 491.6 g
Weight after washing: 489.9 g
Loss by wash: 1.7 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	0.0	0.0%	100.0%
	#40	25.3	5.1%	94.9%
	#50	11.2	2.3%	92.6%
	#100	376.4	76.6%	16.0%
	#200	73.6	15.0%	1.0%
	pan	3.4	1.0%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT

CAN No:	PTW	
Soil wet + Tare	628.8	
Soil dry + Tare	505.8	
Weight water	123	
Tare	14.2	
Weight dry soil	491.6	
W%	25.02	

$$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R[1]
Dr = ☐ measured ☐ estimated
a =

DISPERSING AGENT:
CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-002 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 514.1 g
Weight after washing: 509.9 g
Loss by wash: 4.2 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	0.1	0.0%	100.0%
	#40	221.3	43.0%	56.9%
	#50	11.4	2.2%	54.7%
	#100	224.6	43.7%	11.0%
	#200	51.2	10.0%	1.1%
	pan	1.4	1.1%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT

CAN No:	PTXXX	
Soil wet + Tare	657.8	
Soil dry + Tare	528.3	
Weight water	129.5	
Tare	14.2	
Weight dry soil	514.1	
W%	25.19	

$$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R[1]

Dr = ☐ measured ☐ estimated

a =

DISPERSING AGENT:

CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-003 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 774 g
Weight after washing: 771.8 g
Loss by wash: 2.2 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	0.1	0.0%	100.0%
	#40	323.8	41.8%	58.2%
	#50	32.9	4.3%	53.9%
	#100	342.5	44.3%	9.7%
	#200	71.3	9.2%	0.4%
	pan	1.2	0.4%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT

CAN No:	CAT	
Soil wet + Tare	1003	
Soil dry + Tare	788.4	
Weight water	214.8	
Tare	14.4	
Weight dry soil	774	
W%	27.75	

$$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R[1]
Dr = ☐ measured ☐ estimated
a =

DISPERSING AGENT:
CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-004 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 595.1 g
Weight after washing: 589.4 g
Loss by wash: 5.7 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	1.0	0.2%	99.8%
	#40	132.5	22.3%	77.6%
	#50	106.4	17.9%	59.7%
	#100	316.7	53.2%	6.5%
	#200	31.9	5.4%	1.1%
	pan	0.9	1.1%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT

CAN No:	PT13	
Soil wet + Tare	755.9	
Soil dry + Tare	611.7	
Weight water	144.2	
Tare	16.6	
Weight dry soil	595.1	
W%	24.23	

$$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R[1]

Dr = ☐ measured ☐ estimated

a =

DISPERSING AGENT:

CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-005 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 788.8 g
Weight after washing: 782.2 g
Loss by wash: 6.6 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.1	0.0%	100.0%
	#16	1.2	0.2%	99.8%
	#40	135.6	17.2%	82.6%
	#50	225.3	28.6%	54.1%
	#100	385.3	48.8%	5.2%
	#200	32.5	4.1%	1.1%
	pan	2.3	1.1%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT		
CAN No:	PT6	
Soil wet + Tare	1063	
Soil dry + Tare	805.2	
Weight water	257.7	
Tare	16.4	
Weight dry soil	788.8	
W%	32.67	

$$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$$

Dmm = K $\sqrt{L/T}$ L is function of (R + meniscus) R[1]
Dr = ☐ measured ☐ estimated
a =

DISPERSING AGENT:
CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

CRA ENGINEERING INC.
GEOTECHNICAL GROUP

PARTICLE-SIZE ANALYSIS OF SOILS (ASTM D 422-63)

CLIENT: Gallagher & Kennedy LAB NO:
PROJECT / SITE: Phelps-Dodge Cannelton Site PROJECT NO: 4093

BORING NO: SAMPLE NO: SS-4093-092006-SM-006 DEPTH:
SOIL DESCRIPTION: Fine SAND, trace silt, brown

APPARATUS:
Balance No: Sieve No: Hydrometer No:
Oven No: 1000ml Cylinder No.: Hydrometer Jar No:

SIEVING

TOTAL DRY WEIGHT: 685.3 g
Weight after washing: 668.6 g
Loss by wash: 16.7 g

WEIGHT OF SAMPLE USED ON PASSING #10:
DRY g
HUMID g
% PASSING #10

	SIEVE SIZE	WEIGHT RETAINED (g)	% RETAINED	% TOTAL PASSING
GRAVEL	3"	0.0	0.0%	100.0%
	1"	0.0	0.0%	100.0%
	3/4"	0.0	0.0%	100.0%
	1/2"	0.0	0.0%	100.0%
	3/8"	0.0	0.0%	100.0%
	#4	0.0	0.0%	100.0%
SAND	#8	0.0	0.0%	100.0%
	#10	0.0	0.0%	100.0%
	#16	1.5	0.2%	99.8%
	#40	276.1	40.3%	59.5%
	#50	111.2	16.2%	43.3%
	#100	227.1	33.1%	10.1%
	#200	49.5	7.2%	2.9%
	pan	3.2	2.9%	0.0%

HYDROMETER

°C	T min	R	δR	R - δR	L	L / T	K	D	P%
	0.5								
	1								
	2								
	5								
	15								
	30								
	60								
	120								
	240								
	480								
	1440								

WATER CONTENT

CAN No:	PT10	
Soil wet + Tare	862.6	
Soil dry + Tare	701.8	
Weight water	160.8	
Tare	16.5	
Weight dry soil	685.3	
W%	23.46	

$$P\% = \frac{(R - \delta R)\, a}{Ms} \times 100$$

$Dmm = K \sqrt{L/T}$ L is function of (R + meniscus) R[1]

Dr = ☐ measured ☐ estimated

a =

DISPERSING AGENT:

CONCENTRATION: g/L

REMARKS

PERFORMED BY: Rebecca Bentley DATE: 9/22/2006
CHECKED BY: Michael Gentner DATE: 9/22/2006

ANALYTICAL DRAFT REPORT

PROJECT NO. 4093

TANNERY BAY REMEDIATION

Lot #: A6K010146

Paul Wiseman (PM)

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

Denise D. Heckler
Project Manager

November 2, 2006

EXECUTIVE SUMMARY - Detection Highlights

A6K010146

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-102806-KM-001 10/28/06 001				
Mercury	0.73	0.054	mg/kg	SW846 7471A
Chromium	3350	0.82	mg/kg	SW846 6010B
Percent Solids	60.9	10.0	%	MCAWW 160.3 MOD

ANALYTICAL METHODS SUMMARY

A6K010146

PARAMETER	ANALYTICAL METHOD
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A
Total Residue as Percent Solids	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A6K010146

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
JHNV0	001	SS-4093-102806-KM-001	10/28/06	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-102806-KM-001

TOTAL Metals

Lot-Sample #...: A6K010146-001 **Matrix.....:** SO
Date Sampled...: 10/28/06 **Date Received..:** 11/01/06
% Moisture.....: 39

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6305329						
Mercury	**0.73**	**0.054**	**mg/kg**	**SW846 7471A**	**11/01/06**	**JHNV01AC**
		Dilution Factor: 1		MDL.....: 0.021		
Chromium	**3350**	**0.82**	**mg/kg**	**SW846 6010B**	**11/01/06**	**JHNV01AD**
		Dilution Factor: 1		MDL.....: 0.21		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-102806-KM-001

General Chemistry

Lot-Sample #...: A6K010146-001 **Work Order #...:** JHNV0 **Matrix.....:** SO
Date Sampled...: 10/28/06 **Date Received..:** 11/01/06
% Moisture.....: 39

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**60.9**	**10.0**	**%**	**MCAWW 160.3 MOD**	**11/01-11/02/06**	**6305605**

Dilution Factor: 1 MDL.....: 10.0

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A6K010146 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A6K010000-329 **Prep Batch #...:** 6305329						
Mercury	ND	0.033	mg/kg	SW846 7471A	11/01/06	JHN1C1AA
		Dilution Factor: 1				
Chromium	ND	0.50	mg/kg	SW846 6010B	11/01/06	JHN1C1AC
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A6K010146 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A6K010000-329 **Prep Batch #...:** 6305329							
Mercury	0.83	0.82	mg/kg	98	SW846 7471A	11/01/06	JHN1C1AD
			Dilution Factor: 1				
Chromium	20.0	17.2	mg/kg	86	SW846 6010B	11/01/06	JHN1C1AE
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A6K010146 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A6K010000-329 **Prep Batch #...:** 6305329					
Mercury	98	(73 - 123)	SW846 7471A	11/01/06	JHN1C1AD
		Dilution Factor: 1			
Chromium	86	(80 - 120)	SW846 6010B	11/01/06	JHN1C1AE
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A6K010146 **Matrix.....:** SO
Date Sampled...: 10/28/06 **Date Received..:** 11/01/06

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A6K010146-001 **Prep Batch #...:** 6305329									
Mercury									
	0.73	0.27	0.77	mg/kg	15		SW846 7471A	11/01/06	JHNV01AE
	0.73	0.27	0.86	mg/kg	50	12	SW846 7471A	11/01/06	JHNV01AF
			Dilution Factor: 1						
Chromium									
	3350	32.8	3920	mg/kg			SW846 6010B	11/01/06	JHNV01AG
			Qualifiers: NC,MSB						
	3350	32.8	3390	mg/kg			SW846 6010B	11/01/06	JHNV01AH
			Qualifiers: NC,MSB						
			Dilution Factor: 5						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A6K010146 **Matrix.....:** SO
Date Sampled...: 10/28/06 **Date Received..:** 11/01/06

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A6K010146-001 **Prep Batch #...:** 6305329							
Mercury	15	(10 - 199)			SW846 7471A	11/01/06	JHNV01AE
	50	(10 - 199)	12	(0-50)	SW846 7471A	11/01/06	JHNV01AF
		Dilution Factor: 1					
Chromium	NC,MSB	(75 - 125)			SW846 6010B	11/01/06	JHNV01AG
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	11/01/06	JHNV01AH
		Dilution Factor: 5					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A6K010146 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #: JHQHX1AA		MB Lot-Sample #:	A6K010000-605	
	ND	10.0	%	MCAWW 160.3 MOD	11/01-11/02/06	6305605
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A6K010146 **Work Order #...:** JHP2Q-SMP JHP2Q-DUP **Matrix.....:** SOLID
Date Sampled...: 10/31/06 10:10 **Date Received..:** 11/01/06
% Moisture.....: 28

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A6K010305-004		
	72.0	71.8	%	0.29	(0-20)	MCAWW 160.3 MOD	11/01-11/02/06	6305605

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A6K010146 **Work Order #...:** JHP4W-SMP JHP4W-DUP **Matrix.....:** SOLID
Date Sampled...: 10/30/06 18:30 **Date Received..:** 11/01/06
% Moisture.....: 7.3

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A6K010316-007		
	92.7	94.4	%	1.8	(0-20)	MCAWW 160.3 MOD	11/01-11/02/06	6305605

Dilution Factor: 1

MAPQUEST

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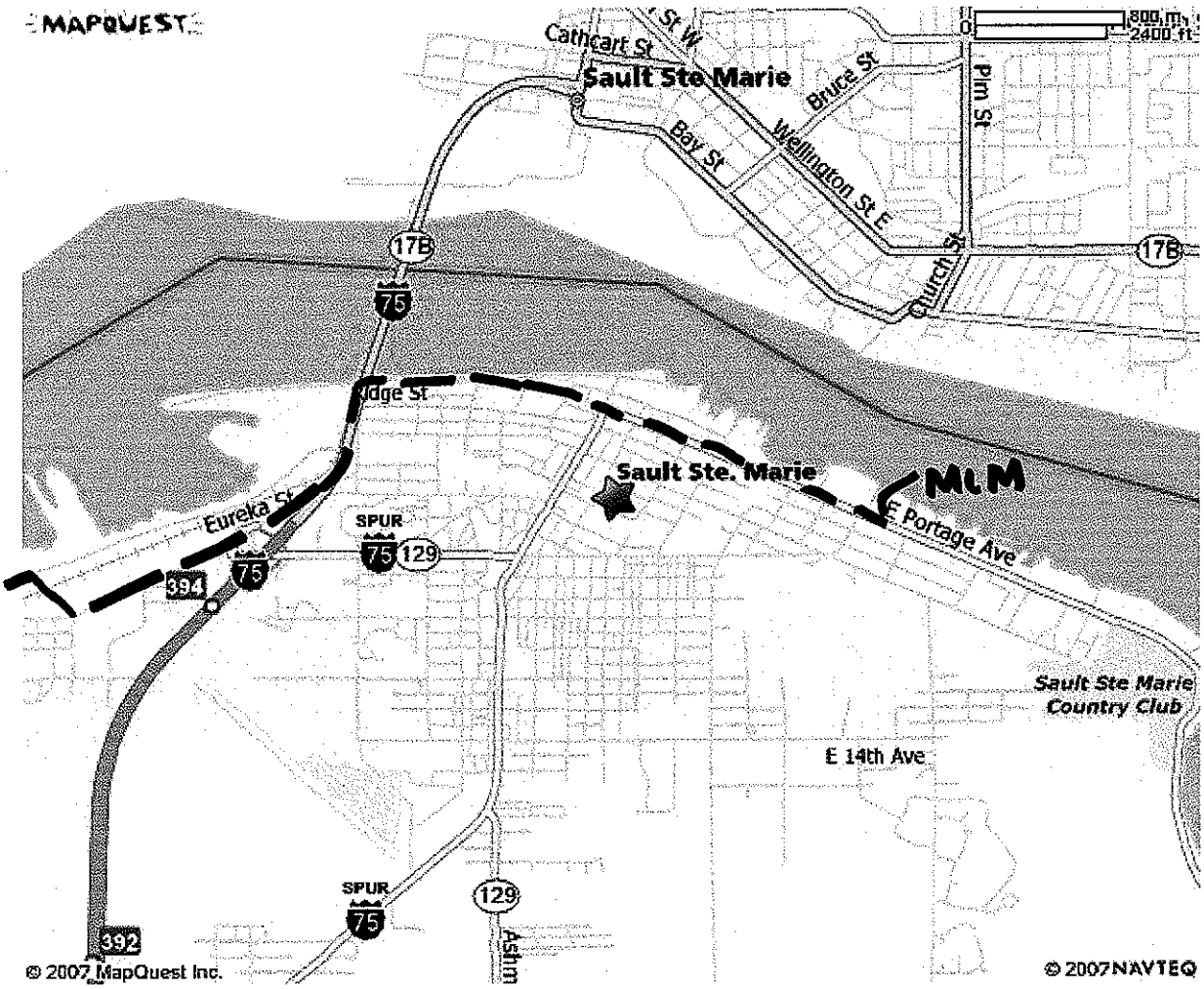

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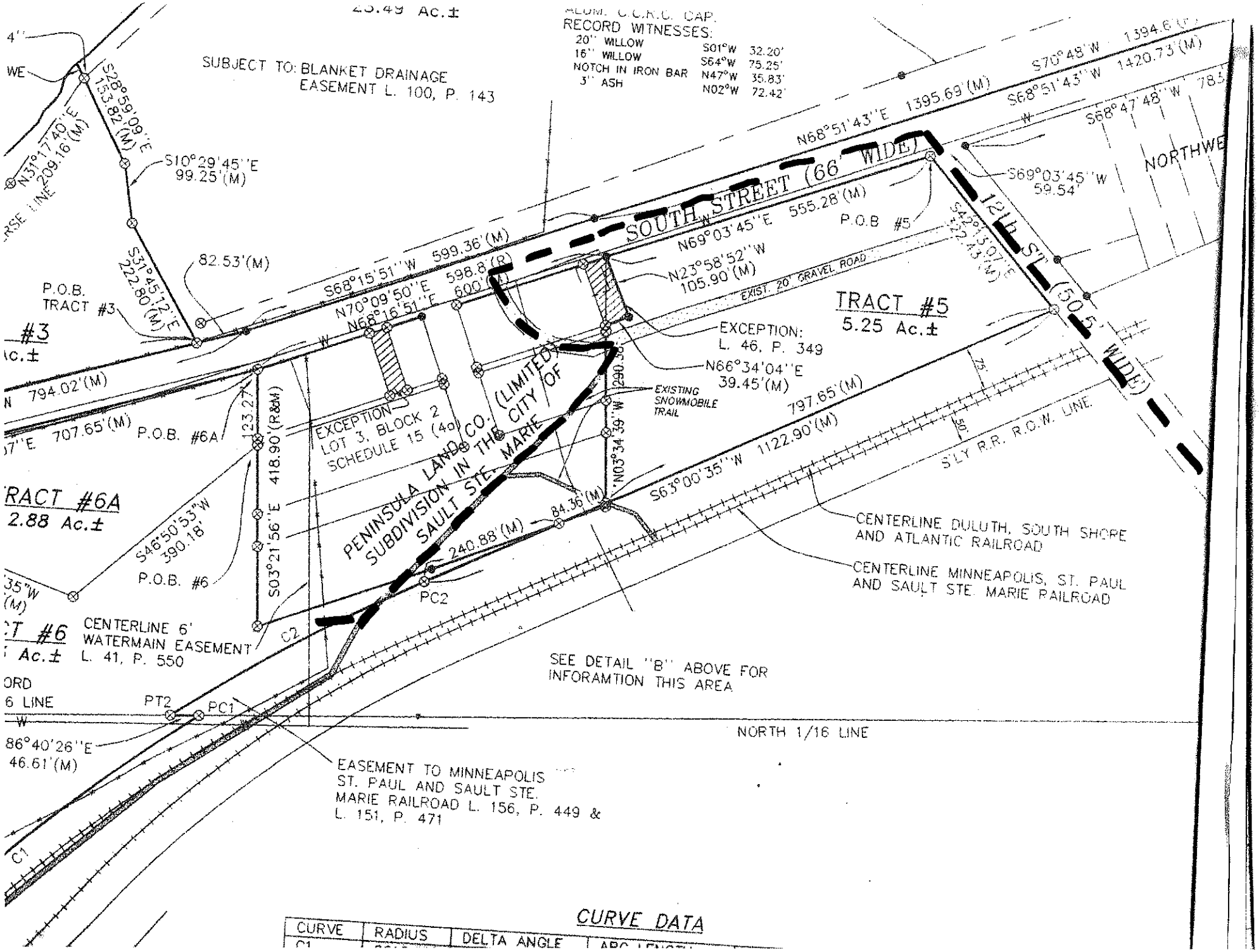


CURVE DATA

CURVE	RADIUS	DELTA ANGLE	ARC LENGTH
C1	[illegible]	[illegible]	[illegible]

LETTER OF TRANSMITTAL

DATE: 6/15/07
JOB NO: 012 01059.200

BBC&M
SOLUTIONS TO BUILD ON

TO: Test America (formerly STL North Canton)

ATTENTION: Ms. Denise Heckler

RE: Results for Sieve Analysis

Enclosed herewith please find:

No. of Copies	Description
6	Gradation Curves

We are sending this material:

	For approval or comment.
	In response to a request from
X	**For your use**
	For the following use:

Remarks: We appreciate being of service on this project if you have any questions, please call.

Very truly yours,

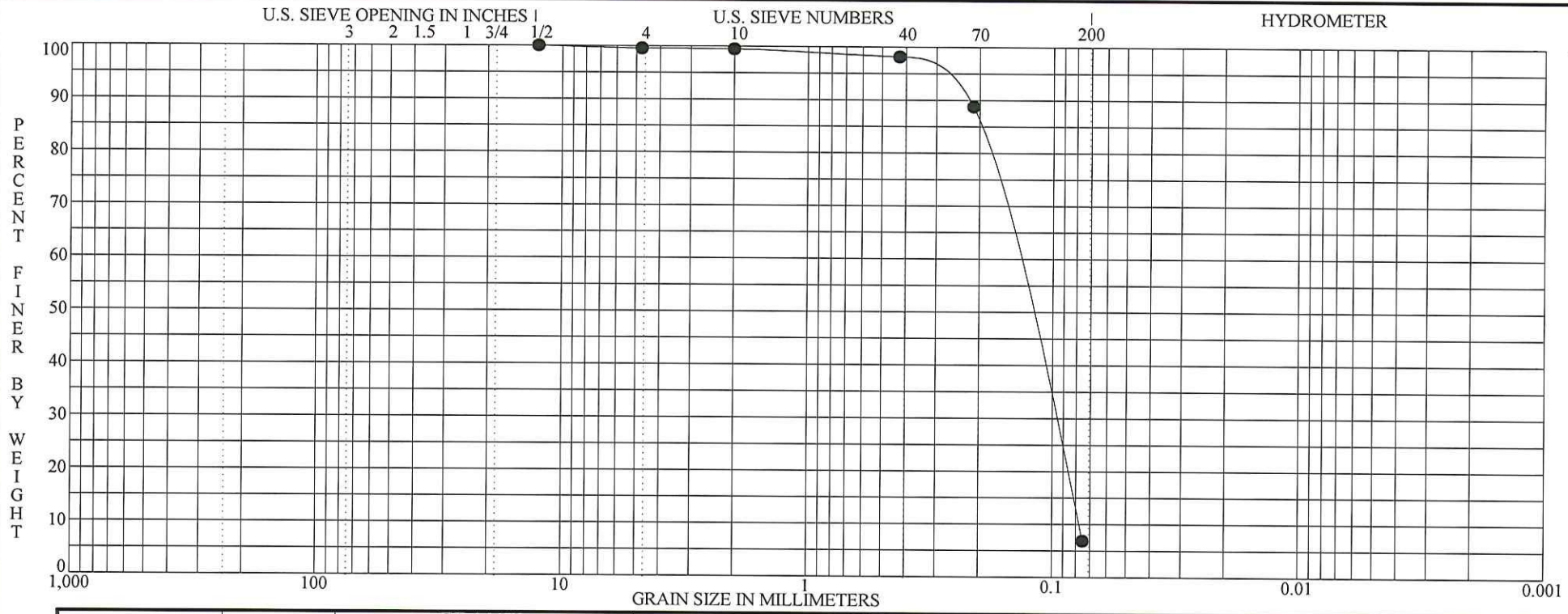
BBC&M ENGINEERING, INC.

Ronald A. Kral

Ronald A. Kral
Cleveland Lab Manager

8555 Sweet Valley Dr., Ste. S • Valley View, OH 44125-4210 • Phone 216.901.1000 • Fax 216.901.9996

BBCM



BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-025	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.881	1.886
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-025	12.5000	0.1472	0.1297	0.0781	0.5	92.7	6.8	
⊠									
▲									
★									
⊙									

ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

PLATE

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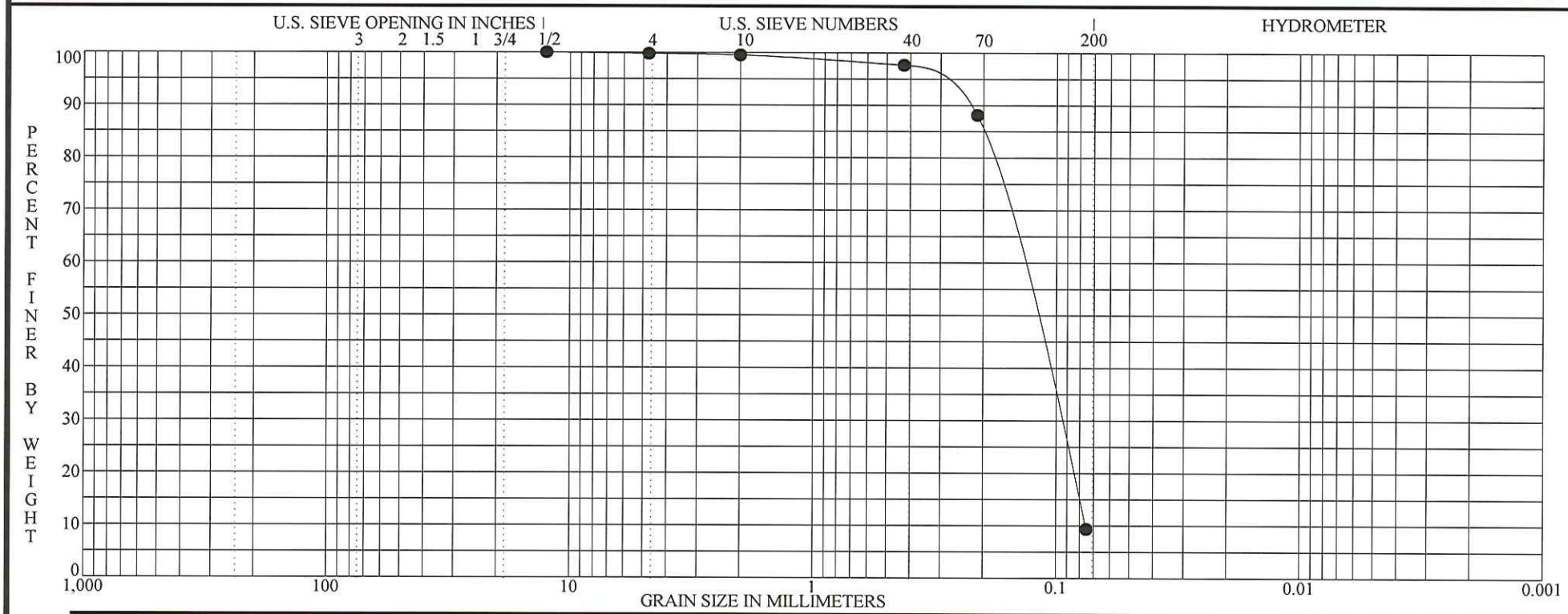

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-026	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.876	1.934
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-026	12.5000	0.1463	0.1282	0.0757	0.2	90.4	9.3	
⊠									
▲									
★									
⊙									

ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

PLATE

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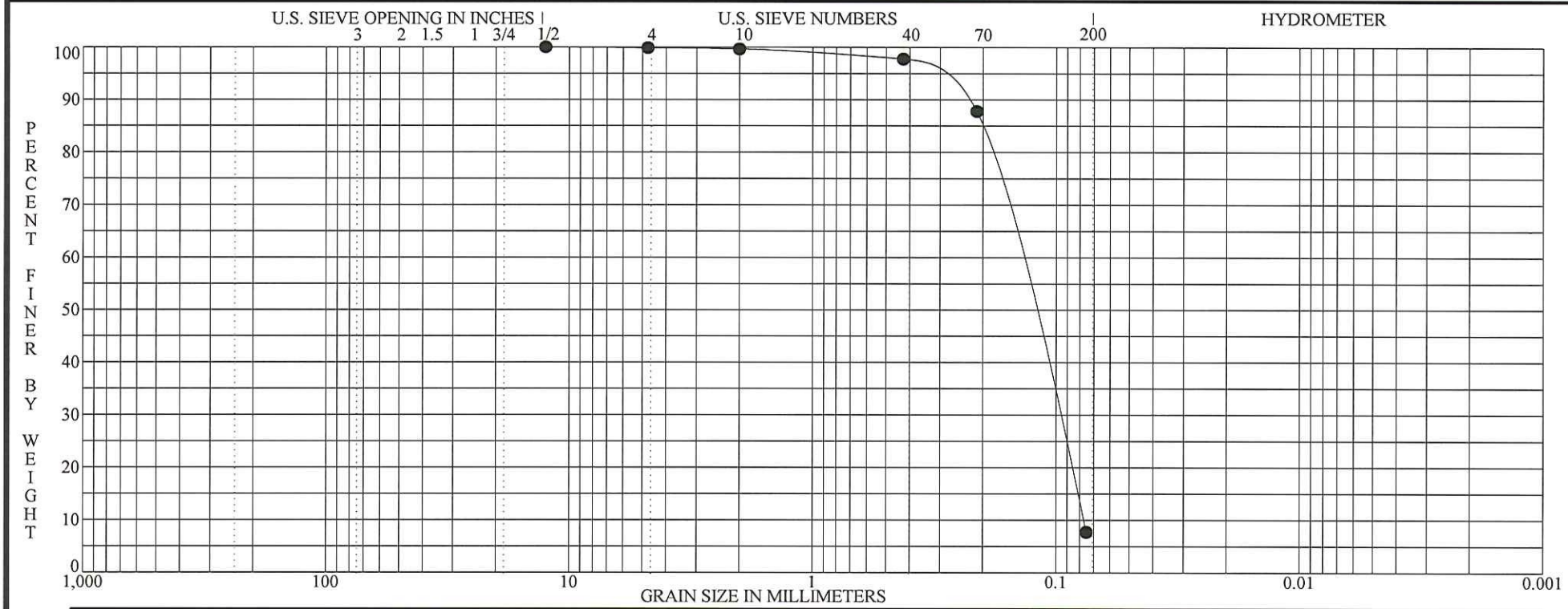

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-027	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.878	1.913
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-027	12.5000	0.1478	0.1299	0.0773	0.2	92.1	7.7	
⊠									
▲									
★									
⊙									

ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

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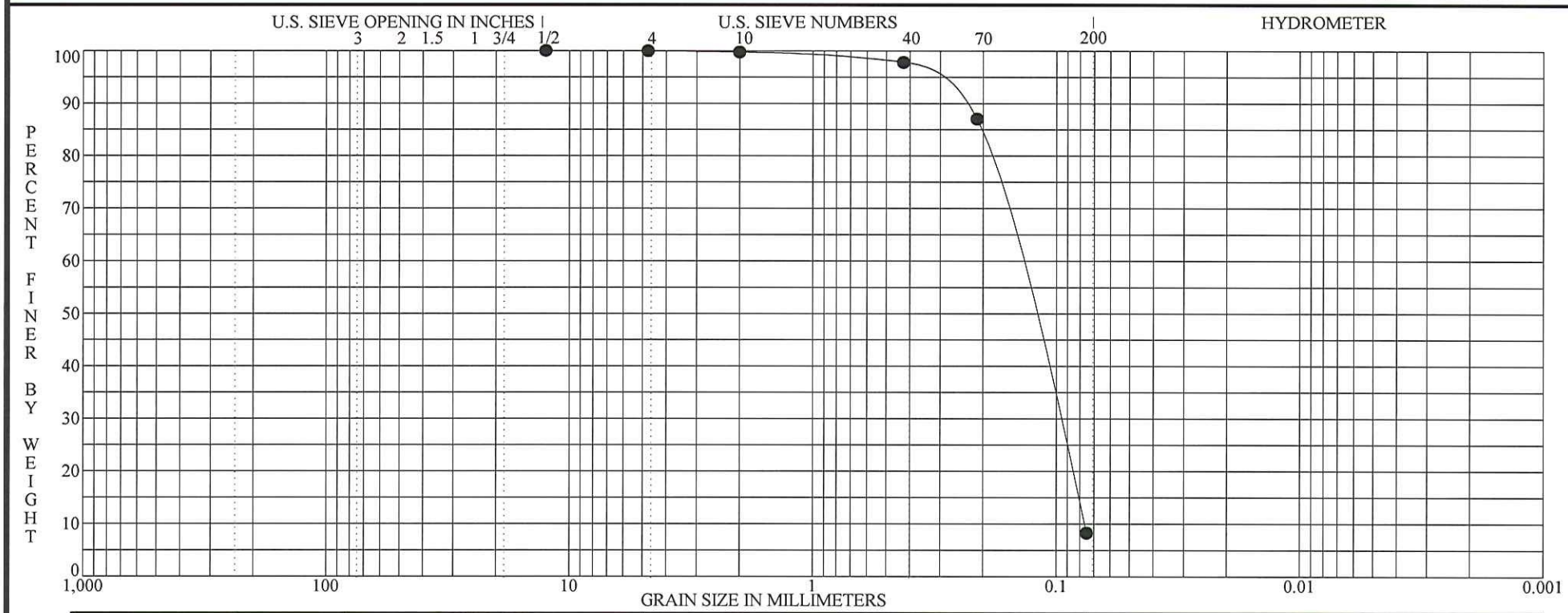

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-028	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.876	1.934
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-028	12.5000	0.1484	0.1300	0.0767	0.0	91.7	8.3	
⊠									
▲									
★									
⊙									

ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

PLATE

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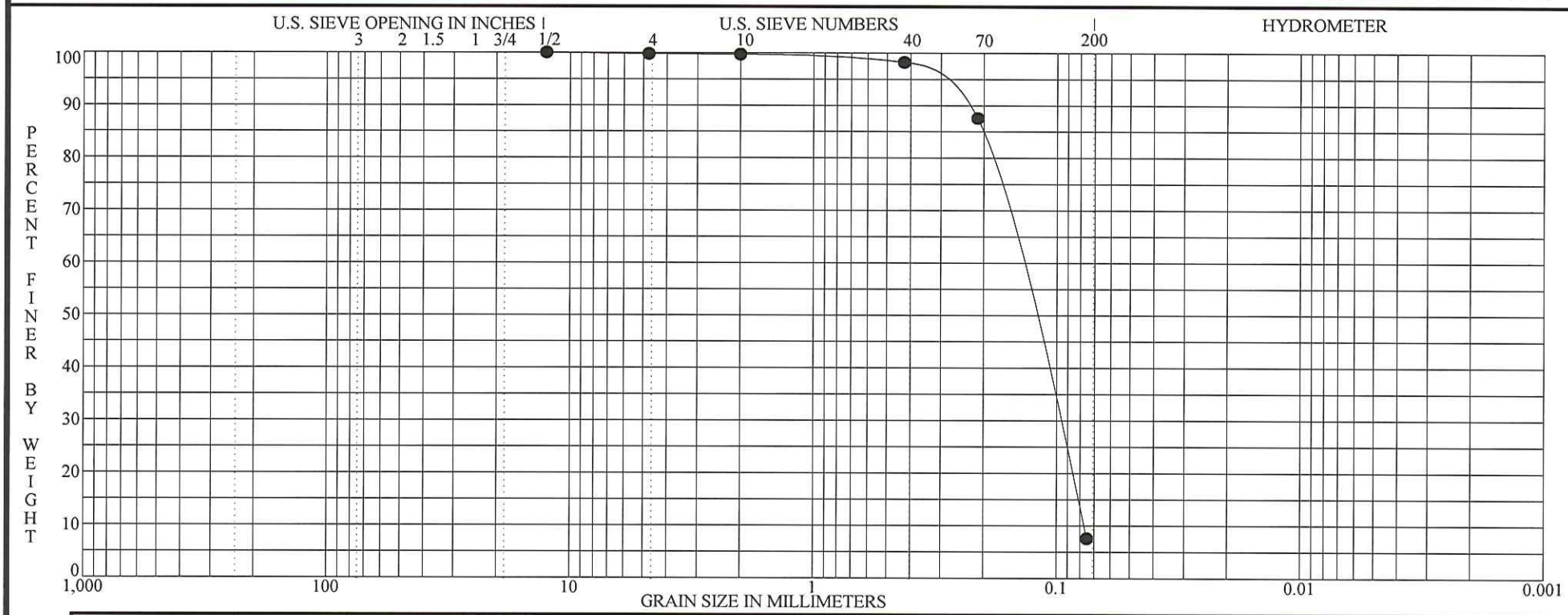

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-029	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.878	1.915
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-029	12.5000	0.1482	0.1302	0.0774	0.2	92.2	7.6	
⊠									
▲									
★									
⊙									

ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

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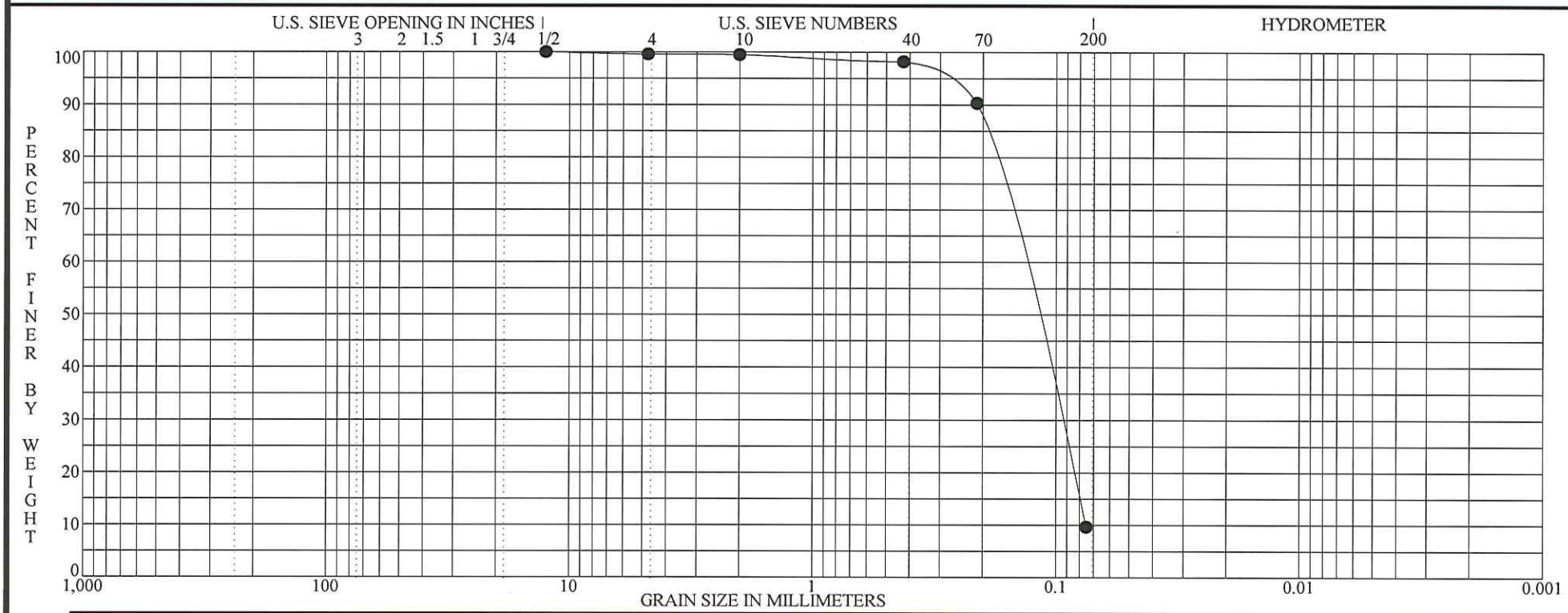

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-030	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.879	1.904
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-030	12.5000	0.1435	0.1261	0.0753	0.4	89.9	9.6	
⊠									
▲									
★									
⊙									

ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

PLATE

GRN-REG

MECHANICAL ANALYSIS REPORT

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Job No. U31-27105

Control Section Identify:
SS-4093-061407-AD-036

Sieve	Retained Fractional		Percent Cumulative		ALLOWABLE
	Weight	Percent	Retained	Passing	
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	1.0	0.20	.2	100.0	
No. 16	1.0	0.20	.4	100.0	
No. 20					
No. 30	2.0	0.30	.7	99.0	
No. 40					
No. 50	23.0	3.70	4.4	96.0	
No. 60					
No. 100	251.0	40.60	45	55.0	
No. 140					
No. 200	288.0	46.60	91.6	8.0	
No. 270					
Passing	23.0	3.70	95.3		
Total	589.0	95.30			

Test No. 36	Date 6/16/07	Time 9 AM
Initial Weight of Sample		618 gm
Weight after Washing		589 gm
Passing No 200 (clay & Silt)	29 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Job No. U31-27105

Control Section Identify:
SS-4093-061407-AD-033

Sieve	Retained Fractional		Percent Cumulative		ALLOWABLE
	Weight	Percent	Retained	Passing	
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	3.0	0.40	0.4	100.0	
No. 16	1.0	0.10	.5	99.0	
No. 20					
No. 30	2.0	0.30	.8	99.0	
No. 40					
No. 50	28.0	4.00	4.8	95.0	
No. 60					
No. 100	294.0	42.20	47	53.0	
No. 140					
No. 200	308.0	44.40	91.4	9.0	
No. 270					
Passing	17.0	2.40	93.8		
Total	653.0	93.80			

Test No. 33	Date 6/16/07	Time 9 AM
Initial Weight of Sample		696 gm
Weight after Washing		653 gm
Passing No 200 (clay & Silt)	43 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Job No. U31-27105

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Control Section Identify:
SS-4093-061407-AD-034

Sieve	Retained Fractional		Percent Cumulative		ALLOWABLE
	Weight	Percent	Retained	Passing	
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	1.0	0.10	.1	100.0	
No. 16	0.0	0.00	.1	100.0	
No. 20					
No. 30	2.0	0.30	.4	100.0	
No. 40					
No. 50	33.0	4.80	5.2	95.0	
No. 60					
No. 100	312.0	45.00	50.2	50.0	
No. 140					
No. 200	295.0	42.60	92.8	7.0	
No. 270					
Passing	17.0	2.50	95.3		
Total	660.0	95.30			

Test No. 34	Date 6/16/07	Time 9 AM
Initial Weight of Sample		693 gm
Weight after Washing		660 gm
Passing No 200 (clay & Silt)	33 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Job No. U31-27105

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Control Section Identify:
SS-4093-061407-AD-037

Sieve	Retained Fractional		Percent Cumulative		ALLOWABLE
	Weight	Percent	Retained	Passing	
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	0.0	0.00	0	100.0	
No. 16	1.0	0.20	.2	100.0	
No. 20					
No. 30	2.0	0.30	.5	99.0	
No. 40					
No. 50	30.0	5.20	5.9	94.0	
No. 60					
No. 100	267.0	46.30	52.2	48.0	
No. 140					
No. 200	235.0	40.70	92.9	7.0	
No. 270					
Passing	12.0	2.10	95		
Total	547.0	94.80			

Test No. 37	Date 6/16/07	Time 9 AM
Initial Weight of Sample		577 gm
Weight after Washing		547 gm
Passing No 200 (clay & Silt)	30 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Job No. U31-27105

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Control Section Identify:
SS-4093-061407-AD-035

Sieve	Retained Fractional		Percent Cumulative		ALLOWABLE
	Weight	Percent	Retained	Passing	
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	1.0	0.20	.2	100.0	
No. 16	1.0	0.20	.4	100.0	
No. 20					
No. 30	2.0	0.50	.9	99.0	
No. 40					
No. 50	28.0	4.80	5.7	94.0	
No. 60					
No. 100	257.0	44.40	50.1	50.0	
No. 140					
No. 200	250.0	43.20	93.3	7.0	
No. 270					
Passing	12.0	2.10	95.4		
Total	551.0	95.40			

Test No. 35	Date 6/16/07	Time 9 AM
Initial Weight of Sample		579 gm
Weight after Washing		551 gm
Passing No 200 (clay & Silt)	28 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Job No. U31-27105

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Control Section Identify:
SS-4093-061407-AD-032

Sieve	Retained Fractional		Percent Cumulative		ALLOWABLE
	Weight	Percent	Retained	Passing	
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	1.0	0.20	.2	100.0	
No. 16	1.0	0.20	.4	100.0	
No. 20					
No. 30	2.0	0.30	.7	99.0	
No. 40					
No. 50	25.0	4.10	4.8	95.0	
No. 60					
No. 100	282.0	46.10	50.9	49.0	
No. 140					
No. 200	248.0	40.70	91.6	8.0	
No. 270					
Passing	11.0				
Total	570.0	91.60			

Test No. 32	Date 6/16/07	Time 9 AM
Initial Weight of Sample		610 gm
Weight after Washing		570 gm
Passing No 200 (clay & Silt)	40 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

Weston Solutions, Inc.
750 E. Bunker Court, Suite 500
Vernon Hills, IL 60061-1450
(847) 918-4000 fax: (847) 918-4055
www.westonsolutions.com

6 August 2007

Mr. Bruce Van Otteren
Michigan Department of Environmental Quality
Remediation and Redevelopment Division
525 W. Allegan Street, 3rd Floor
Lansing, MI 48909

Re: Results from Dredged Sand Disposal Sampling at Cannelton Industries Site, Sault Ste. Marie, Michigan

Dear Mr. Van Otteren:

On 11 June 2007, Weston Solutions, Inc. (WESTON®) collected access material samples for geotechnical and site-specific metals analyses on behalf of the United States Environmental Protection Agency (U.S. EPA) to prepare for material disposal as part of the work being performed at the Cannelton Industries Site in Sault Ste. Marie, Michigan. The material that has been sampled to date has been dredged for access to Tannery Bay and is known to be outside of the Area of Concern. WESTON collected six grab samples for geotechnical analysis (SS-4093-061107-AD-025 through SS-4093-061107-AD-030) and one 10-point composite sample for site-specific metals analysis (SS-4093-061107-AD-031) from approximately 1,000 cubic yards of stockpiled dredge spoils. The samples were placed on ice and shipped under chain of custody by overnight courier to STL North Canton laboratory in North Canton, Ohio (site-specific metals analysis) and Conestoga-Rovers and Associates in Plymouth, Michigan (geotechnical analysis).

On 14 June 2007, WESTON collected an additional 6 grab samples (SS-4093-061407-AD-032 through SS-4093-061407-AD-037) for geotechnical analysis from the same 1,000 cubic yard pile of stockpiled dredge spoils for more rapid turn-around-time. The samples were hand delivered to U.P. Engineers and Architects representative for geotechnical analysis.

The geotechnical testing and analytical results and chain of custodies for the samples collected on 11 and 14 June 2007 are attached to this letter as attachments A and B.

WESTON has compared the geotechnical testing results of grab samples to the criteria for unlimited use as presented in Michigan Department of Environmental Quality (MDEQ) Administrative Rules for Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The Rule states that sediments that are not from an Area of Concern and that are 95 percent retained on a 200-mesh screen are acceptable for all uses.

Results from the geotechnical analysis of the 12 grab samples of dredged sediments indicate that less than 95% of the material was retained on the 200 mesh screen on all 12 grab samples. The results for the 12 grab samples ranged from 89.9% to 93.3% retained on the 200 mesh screen. Therefore additional analytical testing was required to ensure contaminants were not present in the material.

WESTON has compared the analytical results for site-specific metals (arsenic, cadmium, chromium, lead, and mercury) in a composite sample of dredged sand to the MDEQ Administrative Rules for Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The Rule offers screening criteria for cleanup of residential/commercial soils based on exposure pathways and remediation objectives. Laboratory results indicate that concentrations of arsenic,

Weston Solutions, Inc.
750 E. Bunker Court, Suite 500
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(847) 918-4000 fax: (847) 918-4055
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cadmium, mercury, and lead in the sample are below state background levels, as well as the most conservative soil remediation objectives presented for each metal in Operational Memorandum 1, Attachment 1, Table 2 for Residential/Commercial soils. The concentration of chromium in the sample was below the most conservative soil remediation objective in the same table (particulate soil inhalation criteria) for residential properties. The analytical results and criteria are summarized in Table 1.

Based on the analytical results presented in this letter, sand dredged for access to Tannery Bay may be re-used at an upland location. As work continues at the Cannelton Industries Site, contaminated sediments dredged from the Area of Concern will be segregated and disposed of appropriately.

If you have any questions or concerns, please contact me at the on-site trailer (906) 253-9588.

Very truly yours,

WESTON SOLUTIONS, INC.

Chris Lantinga
Project Engineer

cc: Jim Burton, WESTON
M. Tuchman, US EPA
R. Buchanan, Freeport-McMoRan
S. Linebaugh, US EPA
R. Bressan, CRA
Site file

Attachments:
A Laboratory Data Packages
B Sample Chains of Custody

Table 1
Sediment Sample Analytical Results
Access Dredging Material
Cannelton Industries Site

	SS-4093-061107-AD-031			Statewide Default Background Levels	Drinking Water Protection Criteria & RBSLs	Groundwater Surface Water Interface Protection Criteria & RBSLs	Groundwater Contact Protection Criteria & RBSLs	Soil Volatilization to Indoor Air Inhalation Criteria & RBSLs	Infinite Source Volatile Soil Inhalation Criteria (VSIC) & RBSLs	Finite VSIC for 5 Meter Source Thickness	Finite VSIC for 2 Meter Source Thickness	Particulate Soil Inhalation Criteria & RBSLs	Direct Contact Criteria & RBSLs	Soil Saturation Concentration Screening Levels
	mg/kg	ug/kg	Qualifiers											
Mercury	0.034	34	B	130	1,700	50 (M); 1.2	47,000	48,000	52,000	52,000	52,000	2.0E+7	1.6E+5	NA
Arsenic	1.4	1,400		5,800	4,600	70,000 (X)	2.0E+6	NLV	NLV	NLV	NLV	7.2E+5	7,600	NA
Cadmium	0.12	120	B	1,200	6,000	(G,X)	2.3E+8	NLV	NLV	NLV	NLV	1.7E+6	5.5E+5	NA
Chromium	271	271,000		18,000 (total)	1.0E+9 (D)	(G,X)	1.0E+9 (D)	NLV	NLV	NLV	NLV	3.3E+8	7.9E+8	NA
Lead	10.4	10,400		21,000	7.0E+5	(G,X)	ID	NLV	NLV	NLV	NLV	1.0E+8	4.0E+5	NA

Specific Gravity	1.9
Percent Solids (%)	78.7

Notes:

mg/kg = Milligram per kilogram

ug/kg = Microgram per kilogram

B = Estimated results, less than RL

(M) = Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

(Mercury TDL is 0.013 mg/kg, but lab reporting limit is 0.042 mg/kg and MDL is 0.017 mg/kg)

(X) = The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source.

(G) = Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water.

(D) = Calculated criterion exceeds 100 percent, hence it is reduced to

100 percent or 1.0E+9 parts per billion (ppb).

"NA" means a criterion or value is not available or, in the case of background and CAS numbers, not applicable.

"ID" means insufficient data to develop criterion.

"NLV" means hazardous substance is not likely to volatilize under most conditions.

ATTACHMENT A

LABORATORY DATA PACKAGES

MECHANICAL ANALYSIS REPORT

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Job No. U31-27105

Control Section Identify:
SS-4093-061407-AD-035

Sieve	Retained Fractional Weight	Retained Fractional Percent	Percent Cumulative Retained	Percent Cumulative Passing	ALLOWABLE
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	1.0	0.20	.2	100.0	
No. 16	1.0	0.20	.4	100.0	
No. 20					
No. 30	2.0	0.50	.9	99.0	
No. 40					
No. 50	28.0	4.80	5.7	94.0	
No. 60					
No. 100	257.0	44.40	50.1	50.0	
No. 140					
No. 200	250.0	43.20	93.3	7.0	
No. 270					
Passing	12.0	2.10	95.4		
Total	551.0	95.40			

Test No. 35	Date 6/16/07	Time 9 AM
Initial Weight of Sample		579 gm
Weight after Washing		551 gm
Passing No 200 (clay & Silt)	28 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Job No. U31-27105

Control Section Identify:
SS-4093-061407-AD-032

Sieve	Retained Fractional Weight	Retained Fractional Percent	Percent Cumulative Retained	Percent Cumulative Passing	ALLOWABLE
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	1.0	0.20	.2	100.0	
No. 16	1.0	0.20	.4	100.0	
No. 20					
No. 30	2.0	0.30	.7	99.0	
No. 40					
No. 50	25.0	4.10	4.8	95.0	
No. 60					
No. 100	282.0	46.10	50.9	49.0	
No. 140					
No. 200	248.0	40.70	91.6	8.0	
No. 270					
Passing	11.0				
Total	570.0	91.60			

Test No. 32	Date 6/16/07	Time 9 AM
Initial Weight of Sample		610 gm
Weight after Washing		570 gm
Passing No 200 (clay & Silt)	40 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Job No. U31-27105

Control Section Identify:
SS-4093-061407-AD-036

Sieve	Retained Fractional Weight	Retained Fractional Percent	Percent Cumulative Retained	Percent Cumulative Passing	ALLOWABLE
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	1.0	0.20	.2	100.0	
No. 16	1.0	0.20	.4	100.0	
No. 20					
No. 30	2.0	0.30	.7	99.0	
No. 40					
No. 50	23.0	3.70	4.4	96.0	
No. 60					
No. 100	251.0	40.60	45	55.0	
No. 140					
No. 200	288.0	46.60	91.6	8.0	
No. 270					
Passing	23.0	3.70	95.3		
Total	589.0	95.30			

Test No. 36	Date 6/16/07	Time 9 AM
Initial Weight of Sample		618 gm
Weight after Washing		589 gm
Passing No 200 (clay & Silt)	29 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Job No. U31-27105

Control Section Identify:
SS-4093-061407-AD-033

Sieve	Retained Fractional Weight	Retained Fractional Percent	Percent Cumulative Retained	Percent Cumulative Passing	ALLOWABLE
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	3.0	0.40	0.4	100.0	
No. 16	1.0	0.10	.5	99.0	
No. 20					
No. 30	2.0	0.30	.8	99.0	
No. 40					
No. 50	28.0	4.00	4.8	95.0	
No. 60					
No. 100	294.0	42.20	47	53.0	
No. 140					
No. 200	308.0	44.40	91.4	9.0	
No. 270					
Passing	17.0	2.40	93.8		
Total	653.0	93.80			

Test No. 33	Date 6/16/07	Time 9 AM
Initial Weight of Sample		696 gm
Weight after Washing		653 gm
Passing No 200 (clay & Silt)	43 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Job No. U31-27105

Control Section Identify:
SS-4093-061407-AD-034

Sieve	Retained Fractional Weight	Retained Fractional Percent	Percent Cumulative Retained	Percent Cumulative Passing	ALLOWABLE
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	1.0	0.10	.1	100.0	
No. 16	0.0	0.00	.1	100.0	
No. 20					
No. 30	2.0	0.30	.4	100.0	
No. 40					
No. 50	33.0	4.80	5.2	95.0	
No. 60					
No. 100	312.0	45.00	50.2	50.0	
No. 140					
No. 200	295.0	42.60	92.8	7.0	
No. 270					
Passing	17.0	2.50	95.3		
Total	660.0	95.30			

Test No. 34	Date 6/16/07	Time 9 AM
Initial Weight of Sample		693 gm
Weight after Washing		660 gm
Passing No 200 (clay & Silt)	33 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

MECHANICAL ANALYSIS REPORT

Material: Fine Sand Sampled From Tannery Bay

Spec No. N/A Producer N/A

Job No. U31-27105

Control Section Identify:
SS-4093-061407-AD-037

Sieve	Retained Fractional Weight	Retained Fractional Percent	Percent Cumulative Retained	Percent Cumulative Passing	ALLOWABLE
2"					
1½"					
1"					
¾"					
½"					
●℄					
No. 4	0.0	0.00	0	100.0	
No. 8	0.0	0.00	0	100.0	
No. 16	1.0	0.20	.2	100.0	
No. 20					
No. 30	2.0	0.30	.5	99.0	
No. 40					
No. 50	30.0	5.20	5.9	94.0	
No. 60					
No. 100	267.0	46.30	52.2	48.0	
No. 140					
No. 200	235.0	40.70	92.9	7.0	
No. 270					
Passing	12.0	2.10	95		
Total	547.0	94.80			

Test No. 37	Date 6/16/07	Time 9 AM
Initial Weight of Sample		577 gm
Weight after Washing		547 gm
Passing No 200 (clay & Silt)	30 gm	%
Fineness Modulus		%
Crushed Material		%
Organic Plate No.		%
Thin or Elongated Pieces		%
Incrusted, less than ●–Area		%
Incrusted, ●–or more Area		%
1) Soft & Non-Durable Particles		%
2) Chert		%
3) Hard Absorbent Particles		%
Sum of 1)+2)+3)		%
Material Meets or Fails		

Remarks

Signed:

Plant Inspector

ANALYTICAL REPORT

PROJECT NO. 4093

CANNELTON

Lot #: A7F120263

Paul Wiseman (PM)

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

Denise D. Heckler
Project Manager

June 14, 2007

EXECUTIVE SUMMARY - Detection Highlights

A7F120263

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-061107-AD-025 06/11/07 15:40	**001**			
Specific Gravity	1.8		No Units	SM18 2710 F
Percent Solids	75.0	10.0	%	MCAWW 160.3 MOD
SS-4093-061107-AD-026 06/11/07 15:40	**002**			
Specific Gravity	1.8		No Units	SM18 2710 F
Percent Solids	75.2	10.0	%	MCAWW 160.3 MOD
SS-4093-061107-AD-027 06/11/07 15:40	**003**			
Specific Gravity	1.2		No Units	SM18 2710 F
Percent Solids	85.4	10.0	%	MCAWW 160.3 MOD
SS-4093-061107-AD-028 06/11/07 15:40	**004**			
Specific Gravity	1.8		No Units	SM18 2710 F
Percent Solids	74.0	10.0	%	MCAWW 160.3 MOD
SS-4093-061107-AD-029 06/11/07 15:40	**005**			
Specific Gravity	1.9		No Units	SM18 2710 F
Percent Solids	75.4	10.0	%	MCAWW 160.3 MOD
SS-4093-061107-AD-030 06/11/07 15:40	**006**			
Specific Gravity	1.8		No Units	SM18 2710 F
Percent Solids	71.8	10.0	%	MCAWW 160.3 MOD
SS-4093-061107-AD-031 06/11/07 15:40	**007**			
Mercury	0.034 B	0.042	mg/kg	SW846 7471A
Arsenic	1.4	0.64	mg/kg	SW846 6010B
Cadmium	0.12 B	0.13	mg/kg	SW846 6010B
Chromium	271	0.64	mg/kg	SW846 6010B
Lead	10.4	0.38	mg/kg	SW846 6010B
Specific Gravity	1.9		No Units	SM18 2710 F
Percent Solids	78.7	10.0	%	MCAWW 160.3 MOD

ANALYTICAL METHODS SUMMARY

A7F120263

PARAMETER	ANALYTICAL METHOD
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A
Specific Gravity	SM18 2710 F
Total Residue as Percent Solids	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A7F120263

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
J0TDL	001	SS-4093-061107-AD-025	06/11/07	15:40
J0TDR	002	SS-4093-061107-AD-026	06/11/07	15:40
J0TDT	003	SS-4093-061107-AD-027	06/11/07	15:40
J0TDV	004	SS-4093-061107-AD-028	06/11/07	15:40
J0TDW	005	SS-4093-061107-AD-029	06/11/07	15:40
J0TDX	006	SS-4093-061107-AD-030	06/11/07	15:40
J0TD1	007	SS-4093-061107-AD-031	06/11/07	15:40

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-061107-AD-031

TOTAL Metals

Lot-Sample #...: A7F120263-007 Matrix.....: SO
Date Sampled...: 06/11/07 15:40 Date Received..: 06/12/07
% Moisture.....: 21

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 7164019						
Arsenic	1.4	0.64	mg/kg	SW846 6010B	06/13/07	J0TD11AC
		Dilution Factor: 1		MDL.....: 0.43		
Cadmium	0.12 B	0.13	mg/kg	SW846 6010B	06/13/07	J0TD11AD
		Dilution Factor: 1		MDL.....: 0.034		
Chromium	271	0.64	mg/kg	SW846 6010B	06/13/07	J0TD11AE
		Dilution Factor: 1		MDL.....: 0.17		
Mercury	0.034 B	0.042	mg/kg	SW846 7471A	06/13/07	J0TD11AG
		Dilution Factor: 1		MDL.....: 0.017		
Lead	10.4	0.38	mg/kg	SW846 6010B	06/13/07	J0TD11AF
		Dilution Factor: 1		MDL.....: 0.30		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-061107-AD-025

General Chemistry

Lot-Sample #...: A7F120263-001 Work Order #...: J0TDL Matrix.....: SO
Date Sampled...: 06/11/07 15:40 Date Received..: 06/12/07
% Moisture.....: 25

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	75.0	10.0	%	MCAWW 160.3 MOD	06/12-06/13/07	7163519
		Dilution Factor: 1		MDL.....: 10.0		
Specific Gravity	1.8		No Units	SM18 2710 F	06/14/07	7165300
		Dilution Factor: 1		MDL.....:		

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-061107-AD-026

General Chemistry

Lot-Sample #...: A7F120263-002 Work Order #...: J0TDR Matrix.....: SO
Date Sampled...: 06/11/07 15:40 Date Received..: 06/12/07
% Moisture.....: 25

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	75.2	10.0	%	MCAWW 160.3 MOD	06/12-06/13/07	7163519
		Dilution Factor: 1		MDL.....: 10.0		
Specific Gravity	1.8		No Units	SM18 2710 F	06/14/07	7165300
		Dilution Factor: 1		MDL.....:		

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-061107-AD-027

General Chemistry

Lot-Sample #...: A7F120263-003 Work Order #...: J0TDT Matrix.....: SO
Date Sampled...: 06/11/07 15:40 Date Received..: 06/12/07
% Moisture.....: 15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	85.4	10.0	%	MCAWW 160.3 MOD	06/12-06/13/07	7163519
		Dilution Factor: 1		MDL.....: 10.0		
Specific Gravity	1.2		No Units	SM18 2710 F	06/14/07	7165300
		Dilution Factor: 1		MDL.....:		

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-061107-AD-028

General Chemistry

Lot-Sample #...: A7F120263-004 Work Order #...: J0TDV Matrix.....: SO
Date Sampled...: 06/11/07 15:40 Date Received..: 06/12/07
% Moisture.....: 26

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	74.0	10.0	%	MCAWW 160.3 MOD	06/12-06/13/07	7163519
		Dilution Factor: 1		MDL.....: 10.0		
Specific Gravity	1.8		No Units	SM18 2710 F	06/14/07	7165300
		Dilution Factor: 1		MDL.....:		

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-061107-AD-029

General Chemistry

Lot-Sample #...: A7F120263-005 **Work Order #...:** J0TDW **Matrix.....:** SO
Date Sampled...: 06/11/07 15:40 **Date Received..:** 06/12/07
% Moisture.....: 25

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	**75.4**	**10.0**	**%**	**MCAWW 160.3 MOD**	**06/12-06/13/07**	**7163519**
		Dilution Factor: 1		MDL.....: 10.0		
Specific Gravity	**1.9**		**No Units**	**SM18 2710 F**	**06/14/07**	**7165300**
		Dilution Factor: 1		MDL.....:		

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-061107-AD-030

General Chemistry

Lot-Sample #...: A7F120263-006 Work Order #...: J0TDX Matrix.....: SO
Date Sampled...: 06/11/07 15:40 Date Received..: 06/12/07
% Moisture.....: 28

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	71.8	10.0	%	MCAWW 160.3 MOD	06/12-06/13/07	7163519
		Dilution Factor: 1		MDL.....: 10.0		
Specific Gravity	1.8		No Units	SM18 2710 F	06/14/07	7165300
		Dilution Factor: 1		MDL.....:		

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-061107-AD-031

General Chemistry

Lot-Sample #...: A7F120263-007 Work Order #...: J0TD1 Matrix.....: SO
Date Sampled...: 06/11/07 15:40 Date Received..: 06/12/07
% Moisture.....: 21

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	78.7	10.0	%	MCAWW 160.3 MOD	06/12-06/13/07	7163519
		Dilution Factor: 1		MDL.....: 10.0		
Specific Gravity	1.9		No Units	SM18 2710 F	06/14/07	7165300
		Dilution Factor: 1		MDL.....:		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A7F120263 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A7F130000-019 **Prep Batch #...:** 7164019						
Arsenic	ND	0.50	mg/kg	SW846 6010B	06/13/07	J0VH11AM
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/kg	SW846 6010B	06/13/07	J0VH11CH
		Dilution Factor: 1				
Chromium	ND	0.50	mg/kg	SW846 6010B	06/13/07	J0VH11CJ
		Dilution Factor: 1				
Lead	ND	0.30	mg/kg	SW846 6010B	06/13/07	J0VH11AP
		Dilution Factor: 1				
Mercury	ND	0.033	mg/kg	SW846 7471A	06/13/07	J0VH11AU
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7F120263 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7F130000-019 **Prep Batch #...:** 7164019							
Arsenic	200	162	mg/kg	81	SW846 6010B	06/13/07	J0VH11A7
			Dilution Factor: 1				
Lead	50.0	41.7	mg/kg	83	SW846 6010B	06/13/07	J0VH11A9
			Dilution Factor: 1				
Mercury	0.83	0.86	mg/kg	103	SW846 7471A	06/13/07	J0VH11CE
			Dilution Factor: 1				
Cadmium	5.0	4.4	mg/kg	88	SW846 6010B	06/13/07	J0VH11CM
			Dilution Factor: 1				
Chromium	20.0	18.5	mg/kg	93	SW846 6010B	06/13/07	J0VH11CN
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7F120263 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A7F130000-019 **Prep Batch #...:** 7164019					
Arsenic	81	(80 - 120)	SW846 6010B	06/13/07	J0VH11A7
		Dilution Factor: 1			
Lead	83	(80 - 120)	SW846 6010B	06/13/07	J0VH11A9
		Dilution Factor: 1			
Mercury	103	(73 - 123)	SW846 7471A	06/13/07	J0VH11CE
		Dilution Factor: 1			
Cadmium	88	(80 - 120)	SW846 6010B	06/13/07	J0VH11CM
		Dilution Factor: 1			
Chromium	93	(80 - 120)	SW846 6010B	06/13/07	J0VH11CN
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A7F120263 **Matrix.....:** SOLID
Date Sampled...: 06/07/07 10:00 **Date Received..:** 06/09/07

MS Lot-Sample #: A7F120124-001 **Prep Batch #...:** 7164019
% Moisture.....: 13

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Arsenic									
	3.0	231	188	mg/kg	80		SW846 6010B	06/13/07	J0Q1D1CN
	3.0	231	186	mg/kg	79	0.88	SW846 6010B	06/13-06/14/07	J0Q1D1CP
			Dilution Factor: 1						
Cadmium									
	0.16	5.8	5.1	mg/kg	86		SW846 6010B	06/13/07	J0Q1D1DD
	0.16	5.8	5.1	mg/kg	86	0.27	SW846 6010B	06/13-06/14/07	J0Q1D1DE
			Dilution Factor: 1						
Chromium									
	6.2	23.1	37.6 N	mg/kg	136		SW846 6010B	06/13/07	J0Q1D1DG
	6.2	23.1	36.1 N	mg/kg	130	4.0	SW846 6010B	06/13-06/14/07	J0Q1D1DH
			Dilution Factor: 1						
Lead									
	7.8	57.6	62.0	mg/kg	94		SW846 6010B	06/13/07	J0Q1D1CT
	7.8	57.6	61.5	mg/kg	93	0.80	SW846 6010B	06/13-06/14/07	J0Q1D1CU
			Dilution Factor: 1						
Mercury									
	0.034	0.19	0.22	mg/kg	97		SW846 7471A	06/13/07	J0Q1D1C3
	0.034	0.19	0.23	mg/kg	103	5.2	SW846 7471A	06/13/07	J0Q1D1C4
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A7F120263 **Matrix.....:** SOLID
Date Sampled...: 06/07/07 10:00 **Date Received..:** 06/09/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A7F120124-001 **Prep Batch #...:** 7164019							
						% Moisture.....: 13	
Arsenic	80	(75 - 125)			SW846 6010B	06/13/07	J0Q1D1CN
	79	(75 - 125)	0.88	(0-20)	SW846 6010B	06/13-06/14/07	J0Q1D1CP
		Dilution Factor: 1					
Cadmium	86	(75 - 125)			SW846 6010B	06/13/07	J0Q1D1DD
	86	(75 - 125)	0.27	(0-20)	SW846 6010B	06/13-06/14/07	J0Q1D1DE
		Dilution Factor: 1					
Chromium	136 N	(75 - 125)			SW846 6010B	06/13/07	J0Q1D1DG
	130 N	(75 - 125)	4.0	(0-20)	SW846 6010B	06/13-06/14/07	J0Q1D1DH
		Dilution Factor: 1					
Lead	94	(75 - 125)			SW846 6010B	06/13/07	J0Q1D1CT
	93	(75 - 125)	0.80	(0-20)	SW846 6010B	06/13-06/14/07	J0Q1D1CU
		Dilution Factor: 1					
Mercury	97	(10 - 199)			SW846 7471A	06/13/07	J0Q1D1C3
	103	(10 - 199)	5.2	(0-50)	SW846 7471A	06/13/07	J0Q1D1C4
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

N Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A7F120263 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #:	J0WQD1AA	MB Lot-Sample #:	A7F120000-519	
	ND	10.0	%	MCAWW 160.3 MOD	06/12-06/13/07	7163519
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7F120263 **Work Order #...:** J0TD1-SMP J0TD1-DUP **Matrix.....:** SO

Date Sampled...: 06/11/07 15:40 **Date Received..:** 06/12/07

% Moisture.....: 21

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #:	A7F120263-007	
	78.7	78.6	%	0.076	(0-20)	MCAWW 160.3 MOD	06/12-06/13/07	7163519

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A7F120263 **Work Order #...:** J0TDL-SMP J0TDL-DUP **Matrix.....:** SO

Date Sampled...: 06/11/07 15:40 **Date Received..:** 06/12/07

% Moisture.....: 25

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Specific Gravity						SD Lot-Sample #:	A7F120263-001	
	1.8	1.8	No Units	0.38	(0-20)	SM18 2710 F	06/14/07	7165300

Dilution Factor: 1

LETTER OF TRANSMITTAL

DATE: 6/15/07
JOB NO: 012 01059.200

BBC&M
SOLUTIONS TO BUILD ON

TO: Test America (formerly STL North Canton)

ATTENTION: Ms. Denise Heckler

RE: Results for Sieve Analysis

Enclosed herewith please find:

No. of Copies	Description
6	Gradation Curves

We are sending this material:

	For approval or comment.
	In response to a request from
X	**For your use**
	For the following use:

Remarks: We appreciate being of service on this project if you have any questions, please call.

Very truly yours,

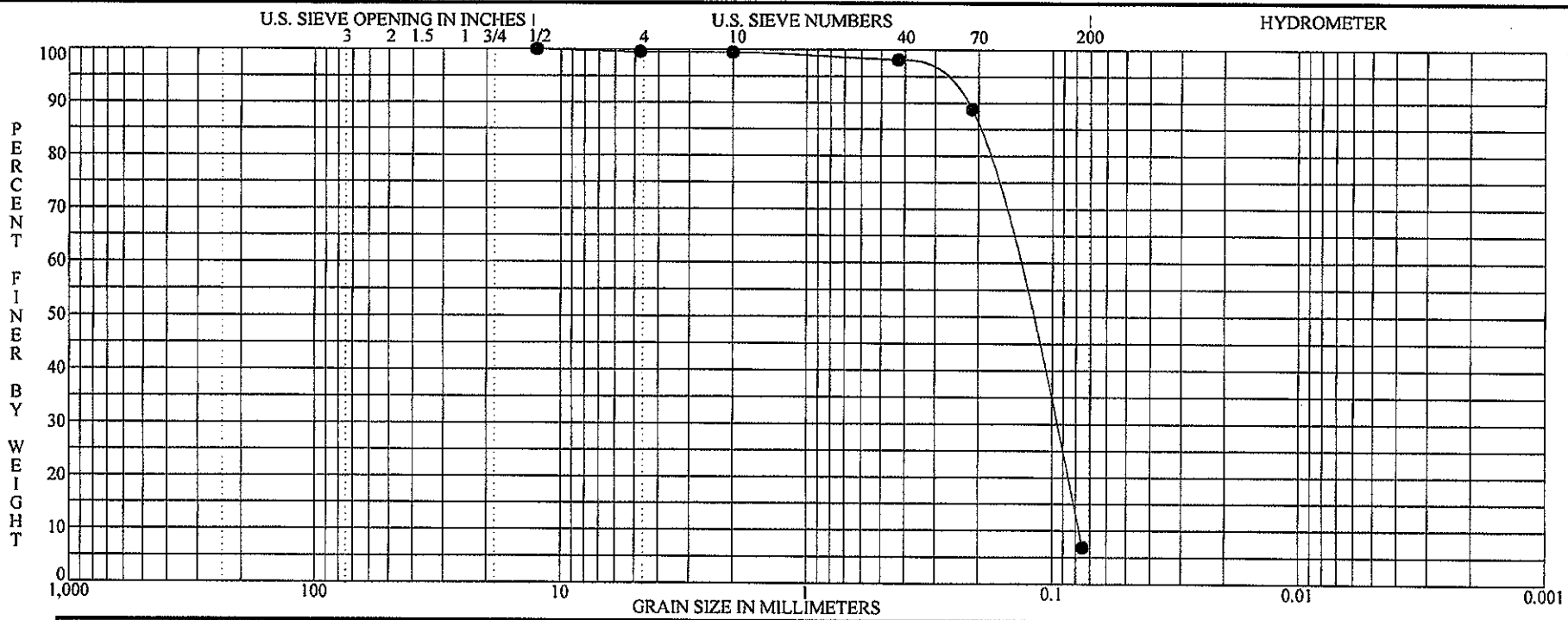
BBC&M ENGINEERING, INC.

Ronald A. Kral

Ronald A. Kral
Cleveland Lab Manager

8555 Sweet Valley Dr., Ste. S • Valley View, OH 44125-4210 • Phone 216.901.1000 • Fax 216.901.9996

BBCM



BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-025	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.881	1.886
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-025	12.5000	0.1472	0.1297	0.0781	0.5	92.7	6.8	
⊠									
▲									
★									
⊙									

ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

PLATE

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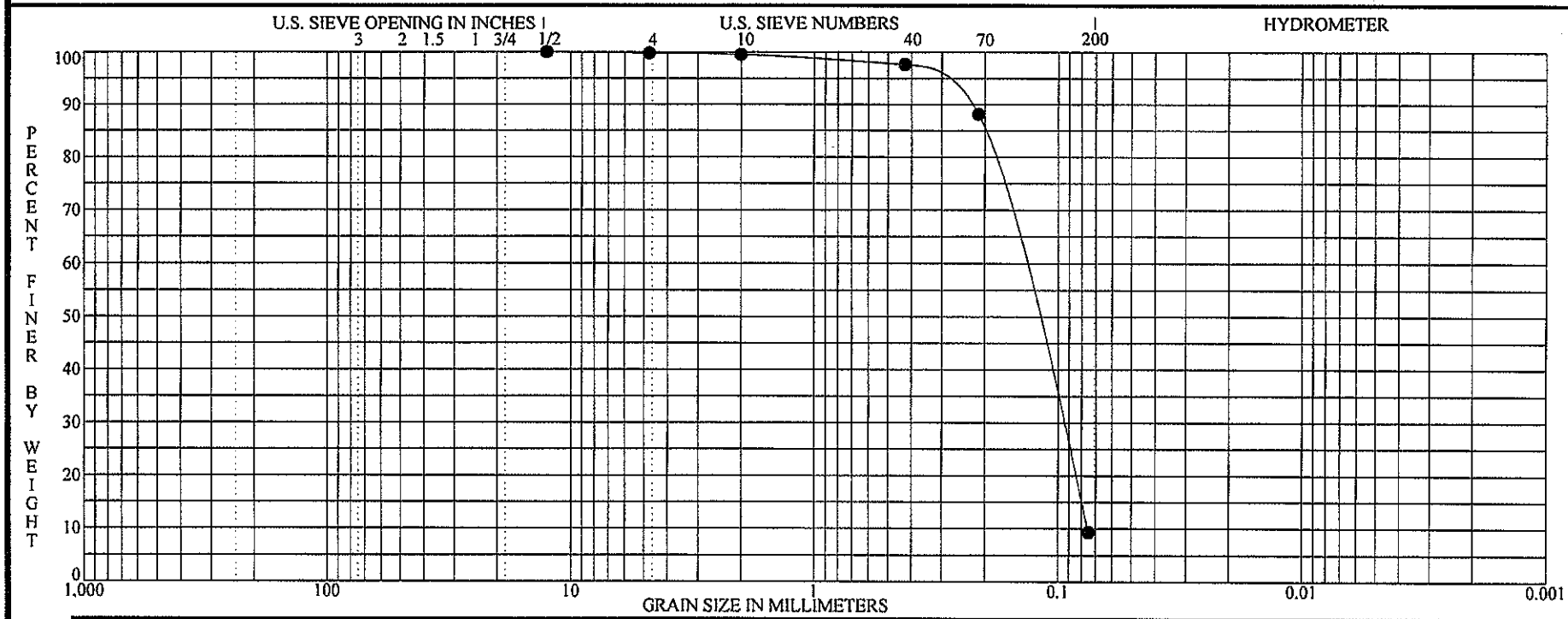

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-026	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.876	1.934
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-026	12.5000	0.1463	0.1282	0.0757	0.2	90.4	9.3	
⊠									
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PLATE

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ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

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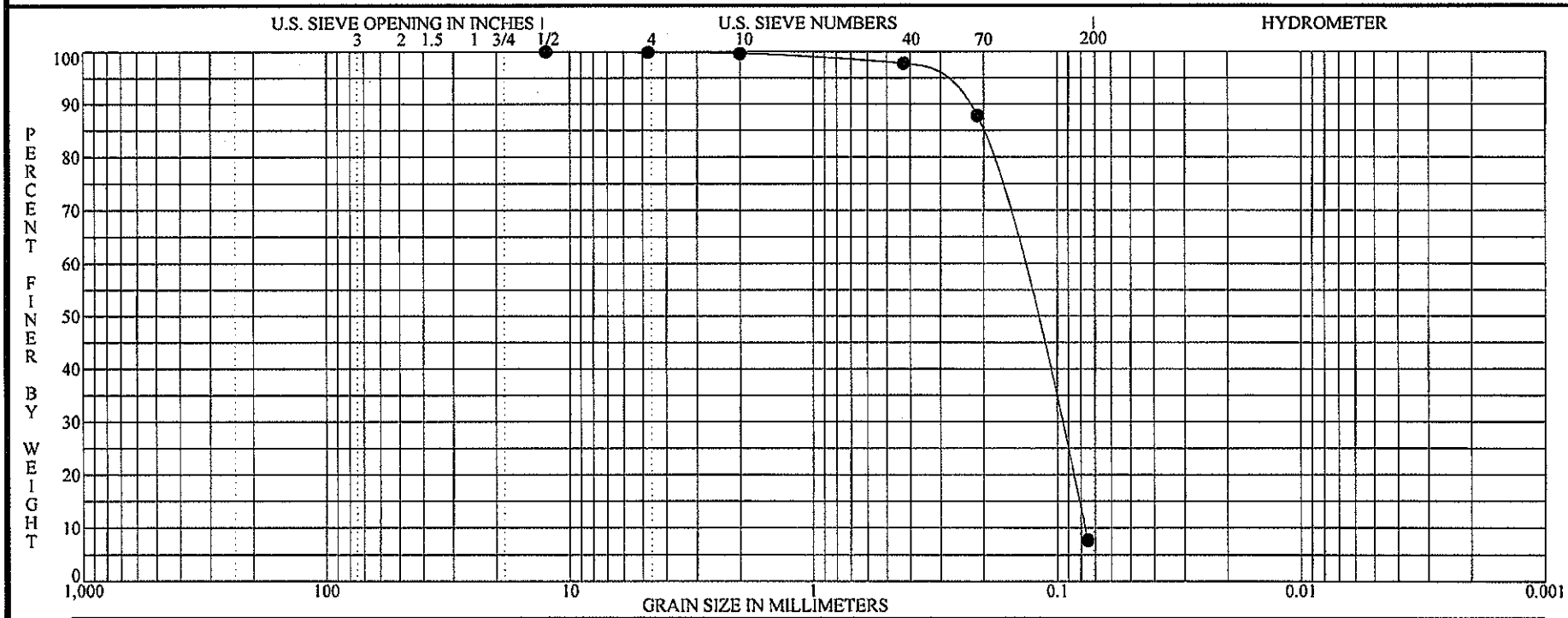

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-027	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.878	1.913
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-027	12.5000	0.1478	0.1299	0.0773	0.2	92.1	7.7	
⊠									
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★									
⊙									

PLATE

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ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

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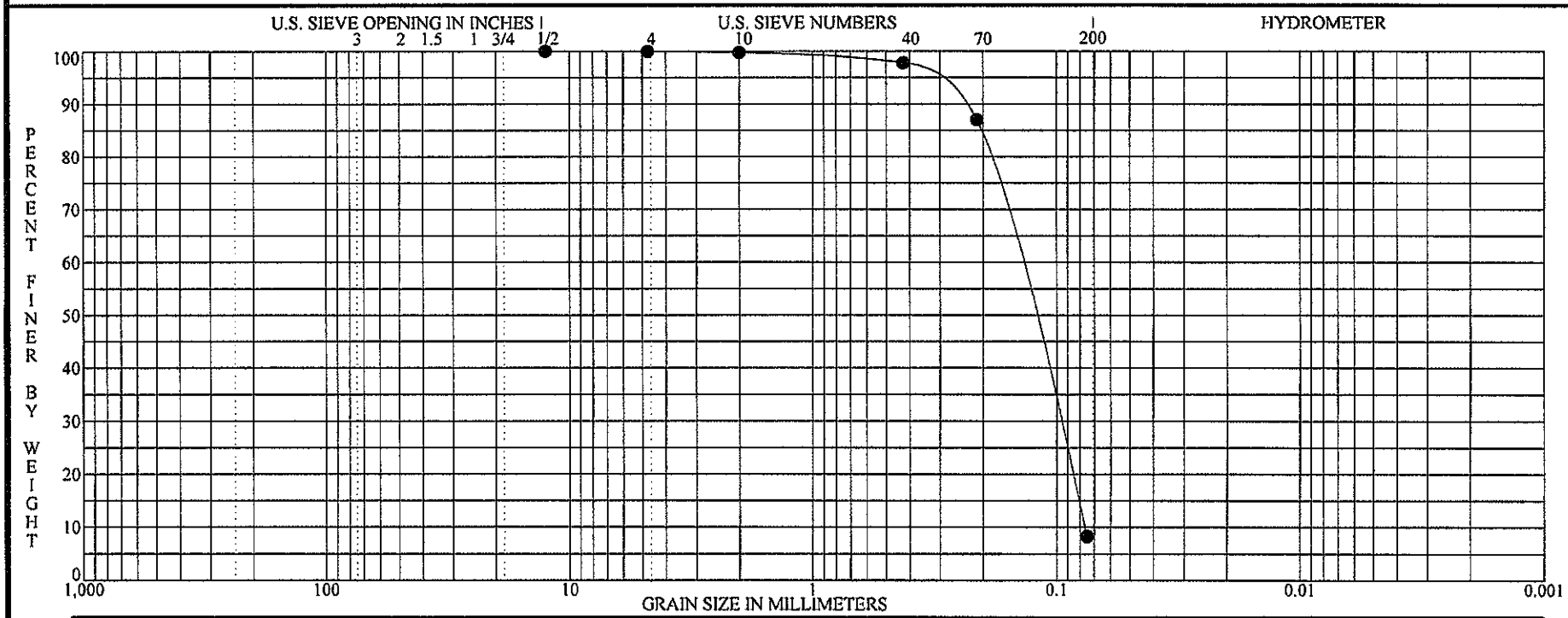

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-028	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.876	1.934
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-028	12.5000	0.1484	0.1300	0.0767	0.0	91.7	8.3	
⊠									
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★									
⊙									

PLATE

GRN-REG

ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

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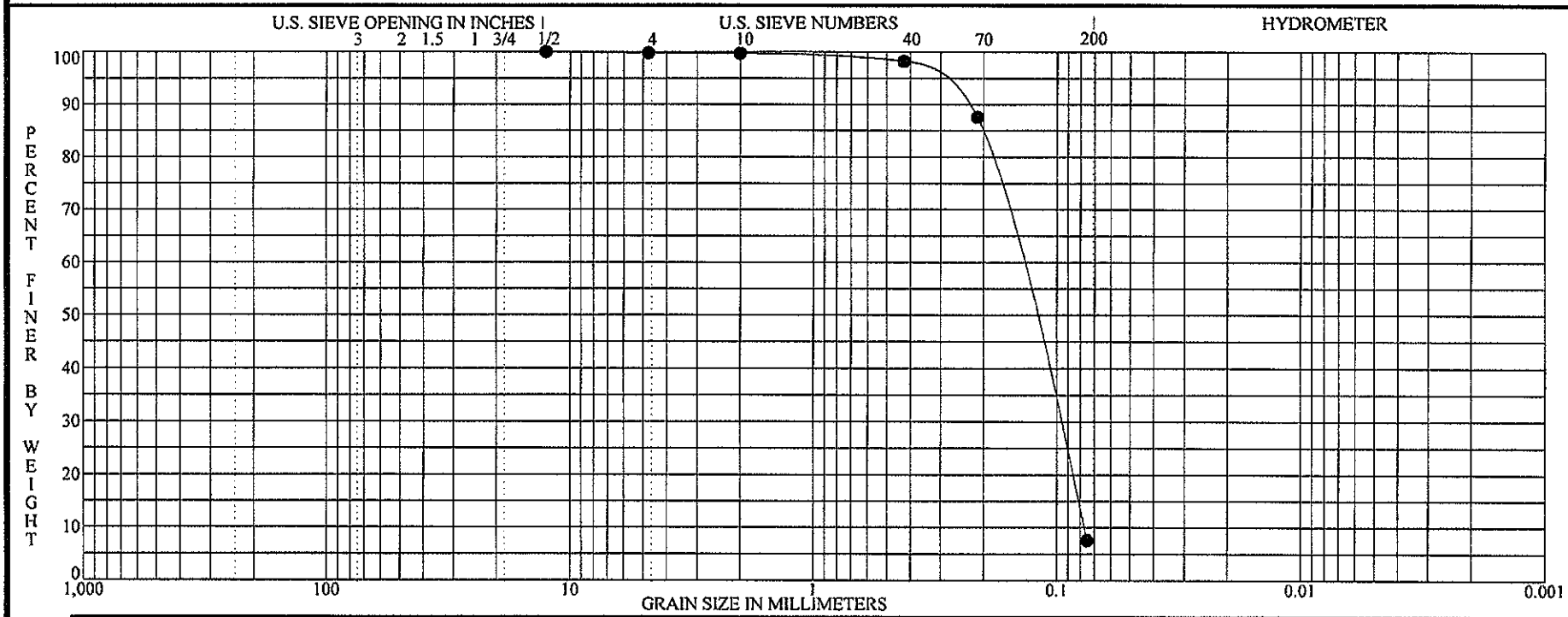

BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-029	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.878	1.915
☒								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-029	12.5000	0.1482	0.1302	0.0774	0.2	92.2	7.6	
☒									
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★									
⊙									

PLATE

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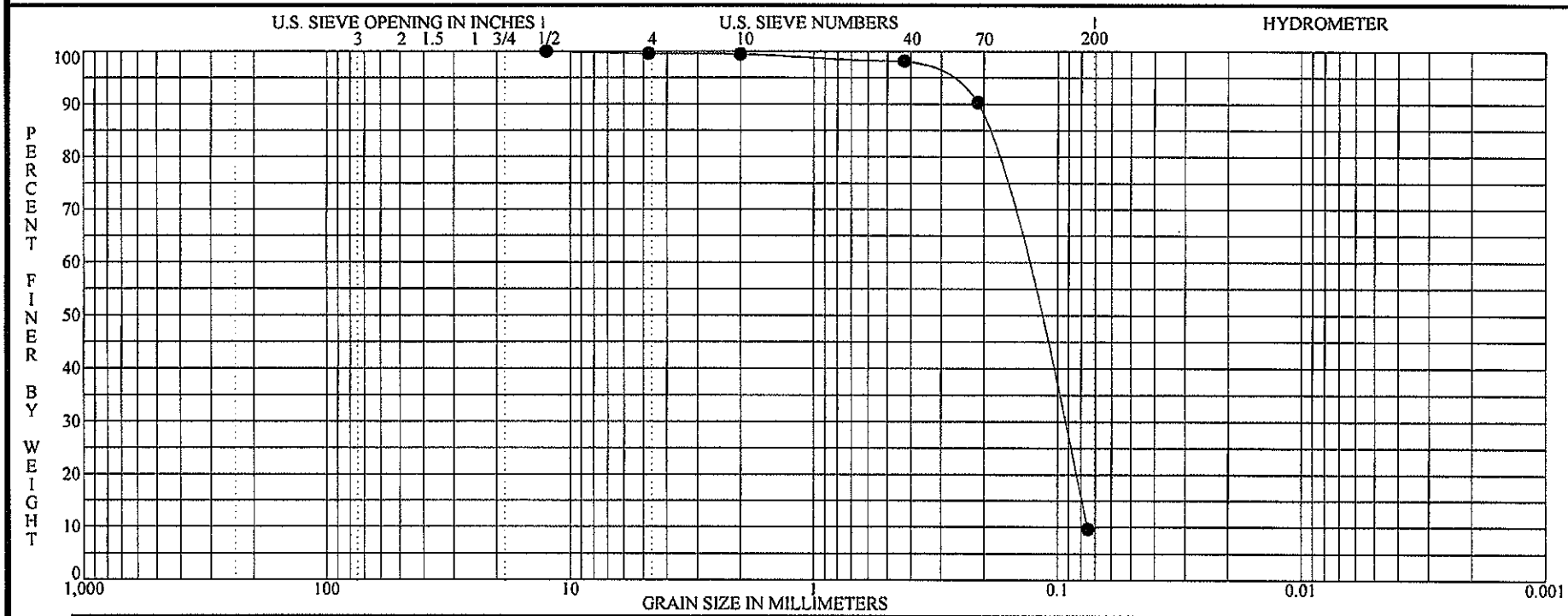
ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

BBCM



BOULDERS	COBBLES	GRAVEL		SAND			SILT OR CLAY
		coarse	fine	coarse	medium	fine	

	Specimen Identification - Depth	Classification	MC%	LL	PL	PI	Cc	Cu
●	SS-4093-061107-AD-030	USCS Classification: SP-SM (Poorly Graded Sand with Silt)					0.879	1.904
⊠								
▲								
★								
⊙								

	Specimen Identification - Depth	D100	D60	D50	D10	%Gravel	%Sand	%Silt	%Clay
●	SS-4093-061107-AD-030	12.5000	0.1435	0.1261	0.0753	0.4	89.9	9.6	
⊠									
▲									
★									
⊙									

ASTM D422

GRADATION CURVE

PROJECT TEST AMERICA (STL) SIEVE ANALYSIS (A7F120255)
LOCATION NORTH CANTON OH
JOB NO. 012.01059.200 DATE 6/15/07

PLATE

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ATTACHMENT B

SAMPLE CHAIN OF CUSTODY

CONESTOGA-ROVERS & ASSOCIATES

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

PAGE 1 OF 1

ID # № D 2798

SSOW Ref. Code: SSOW-HMS-040

Required Client Information:

Company: CRA, Inc.	Report To: [illegible]
Address: 14496 Sheldon Rd.	Copy To:
Suite 200	Invoice To: [illegible]
Plymouth, MI 48170	P.O.:
Phone: 734-453-5123	Project Name: [illegible]
Fax: 734-453-5201	Project Number:
Email:	

Laboratory: STL North Canton	
Laboratory Location: [illegible] Dr NW	
Laboratory Contact:	
Requested Due Date:	TAT: 3 Days
QA/QC Requirements: [illegible]	

Valid Matrix Codes:
WG Groundwater
WB Borehole Water
WS Surface Water
SO Soil
SE Sediment
See Back for Additional Codes

Analysis and Method

	Sample Identification:	Matrix Code	Date Collected	Time Collected	# Containers	Unpreserved	HCl	H2SO4	HNO3	NaOH	Other:	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Remarks/Lab ID
1.	SS-4093-061107-AD-025	SE	[illegible]	[illegible]	1	X						X									
2.	SS-4093-061107-AD-026	SE	↓	↓	1	X						X									
3.	SS-4093-061107-AD-027	SE	↓	↓	1	X						X									
4.	SS-4093-061107-AD-028	SE	↓	↓	1	X						X									
5.	SS-4093-061107-AD-029	SE	↓	↓	1	X						X									
6.	SS-4093-061107-AD-030	SE	↓	↓	1	X						X									
7.	~~SS~~ SS-4093-061107-AD-031	SE	↓	↓	1	X							X	X							
8.																					
9.																					
10.																					
11.																					
12.																					
13.																					
14.																					
15.																					
	TOTAL NUMBER OF CONTAINERS																				

SHIPMENT METHOD	NO. OF COOLERS	RELINQUISHED BY / AFFILIATION	DATE	TIME	RECEIVED BY / AFFILIATION	DATE	TIME
FedEx	1	[illegible] / [illegible]	6/11/07	1100	[illegible]	[illegible]	[illegible]
AIRBILL NO.							

Sample Condition

Temp in °C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Samples Intact	Y / N

Additional Comments:

Sampler Name: [illegible]

Sampler Signature: [illegible] Date: [illegible]

Distribution: WHITE - Fully Executed Copy YELLOW - Receiving Laboratory Copy PINK - Shipper GOLDENROD - Sampler Copy

REV. 0 (6-04)

WASTE MANAGEMENT

RIDGEVIEW RECYCLING & DISPOSAL FACILITY
P.O. Box 227
6207 Hempton Lake Road
Whitelaw, WI 54247
(920) 732-4473
(920) 732-3758 Fax

September 9, 2005

Mr. Matt T. Crain
Principal Project Manager
Weston Solutions, Inc.
Suite 500
750 East Bunker Court
Vernon Hills, IL 60061-1450

RE: Disposal Approval: DFT MW 755947 Sediments from Tannery Bay
Cyprus Mines Corporation
1000 South Street
Sault Ste. Marie, MI 49783

Dear Mr. Crain:

Following is a copy of the approval to accept the above referenced special waste for disposal at Waste Management's Dafter Landfill, Dafter, Michigan. Please review the approval and take note of Section II A- Management Methods, and B- Precautions, Conditions or Limitations on the approval. This section identifies the regulatory conditions of the approval and Waste Management's policies and procedures for the disposal of this material.

Thank you for choosing Waste Management - we appreciate your business!! Please don't hesitate to contact me with questions, or if I can be of further assistance. I can be reached at 800/444-7919 ext. 230.

920-732-3758 FAX

Sincerely,
Waste Management of WI, Inc.

Marie Jaszewski

Marie Jaszewski
Industrial Account Manager
Northern Wisconsin and Upper Michigan

cc: Robert Bressan, CRA

WM WASTE MANAGEMENT

NORTHERN REGION
SPECIAL WASTE MANAGEMENT DECISION

OFT MW 755941
Waste Profile Status Code

Request For Decision: X Initial ___ Renewal ___ High Volume (F,A,P,N/A)

GENERATOR NAME: Cyprus Mines Corp. ADDRESS: 1000 South St.

CITY/STATE: Sault Ste. Marie, Mich

SITE NAME(S): Sediments from Tannery Bay

PROPOSED MANAGEMENT FACILITY: Cliffs U.F.

PROPOSED INTERMEDIATE TRANSFER FACILITY: N/A

WM REQUESTER: Marie Jaszewski TRANSPORTER TBD

TECHNICAL MANAGER DECISION: (circle one) APPROVED DISAPPROVED SIGNATURE: Marie Jaszewski

Disapproved, Explain: ___ Check if additional information is attached.

Approved, Complete A,B,C & D Below:

Management Method(s): LANDFILL (CODISPOSAL)

Precautions, Conditions, or Limitations on Approval: Per the sites Special Waste Plan

Waste must not contain free liquids.

Decision Expiration Date: 12/31/06

TECH MGR. SIGNATURE: Richard Pager NAME (Print): Richard L. Pager DATE: 9/9/05

WM MANAGEMENT FACILITY SITE MANAGER DECISION (circle one) APPROVED DISAPPROVED

Approved, State Any Special Precautions, Terms, or Limitations

MGR. SIGNATURE: ___ NAME (Print): ___ DATE: 9/9/05

WM INTERMEDIATE TRANSFER FACILITY SITE MANAGER DECISION (circle one) APPROVED DISAPPROVED

Approved, State Any Special Precautions, Terms, or Limitations

MGR. SIGNATURE: ___ NAME (Print): ___ DATE: ___

GENERATOR'S WASTE PROFILE SHEET

Profile Number: MW

Profile History ☐ Renewal ☐ Initial
Renewal Date:

A. Waste Generator Information

1. Generator Name: CYPRUS MINES CORPORATION
2. SIC Code:
3. Facility Street Address: 1000 SOUTH ST.
4. Phone: (602) 366-8567
5. Facility City: SAULT STE.MARIE
6. State/Province: MI
7. Zip/Postal Code: 49783
8. Generator USEPA/Federal ID #:
9. County: CHIPPEWA
10. State/Province ID #:
11. Customer Contact: DAN JOHNSON
12. Customer Phone: (602)366-8567
13. Customer Fax: 602-366-7313

B. Waste Stream Information

1. **Description**
   a. Name of Waste: SEDIMENTS FROM TANNERY BAY
   b. Process Generating waste: REMEDIATION ACTIVITIES RESULTIN IN THE REMOVAL OF SEDIMENTS FROM TANNERY BAY

c. Color	d. Strong odor (describe):	e. Physical state @ 70°F	f. Layers	g. Free liquid range
BROWN		☐ Solid ☐ Liquid ☐ Gas ☐ Sludge ☒ Other SEDIMENTS ☐ Powder /Dust	☒ Single Layer ☐ Multi-layer	to % h. pH: Range 6 to 8

i. Liquid Flash Point: ☐ <73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☒ Not applicable

j. Physical and Chemical Composition (List all constituents [including organics, debris, UHC's, and any incidental or periodic materials] present in any concentration and submit representative sample or analysis)(where non-hazardous organic solvents are present, please explain source):

Constituents	Concentration Range	Constituents	Concentration Range
SEDIMENTS	90%	MISC PPE	.5%
WOOD	3%	SAW DUST (IF REQUIRED)	5%
MISC DEBRIS	1.5%		

NOTE: Wood and misc debris may be transported/disposed separately from sediment

2. **Quantity of Waste**
   Estimate Annual Volume 40,000 ☒ Tons ☐ Yards ☐ Drums ☐ Other (specify)
3. **Shipping Information**
   a. Packaging: ☒ Bulk Solid ☐ Bulk Liquid ☐ Drum ☐ Other Type/Size: SEMI DUMPS
   b. Shipping Frequency: Units 1100 TONS Per: ☐ Month ☐ Quarter ☐ Year ☐ One time ☒ Other DAY

C. Sampling Source

1. **Sampling Source** (e.g., Drum, Lagoon, Pit, Pond, Tank, Vat) SAMPLES WERE EXTRACTED FROM TANNERY BAY WHICH IS THE SOURCE OF CONTAMINATED SEDIMENTS.

D. Representative Sample Certification

1. **Print Sampler's Name:** MR. ROBERT BRESSAN
2. **Sample Date:** TOTAL RESULTS = 8/12/04
   TCLP RESULTS = 6/8/05
3. **Sampler's Title:** PROJECT MANAGER
4. **Sampler's Employer (if other than Generator):** CONESTOGA-ROVERS AND ASSOCIATES
   The sampler's signature certifies that any sample submitted is representative of the waste describe above pursuant to 40 CFR 261.20© or equivalent rules.
5. **Sampler's Signature** (for CRA) *sig.

E. Generator Certification

By signing this profile sheet, the Generator certifies:

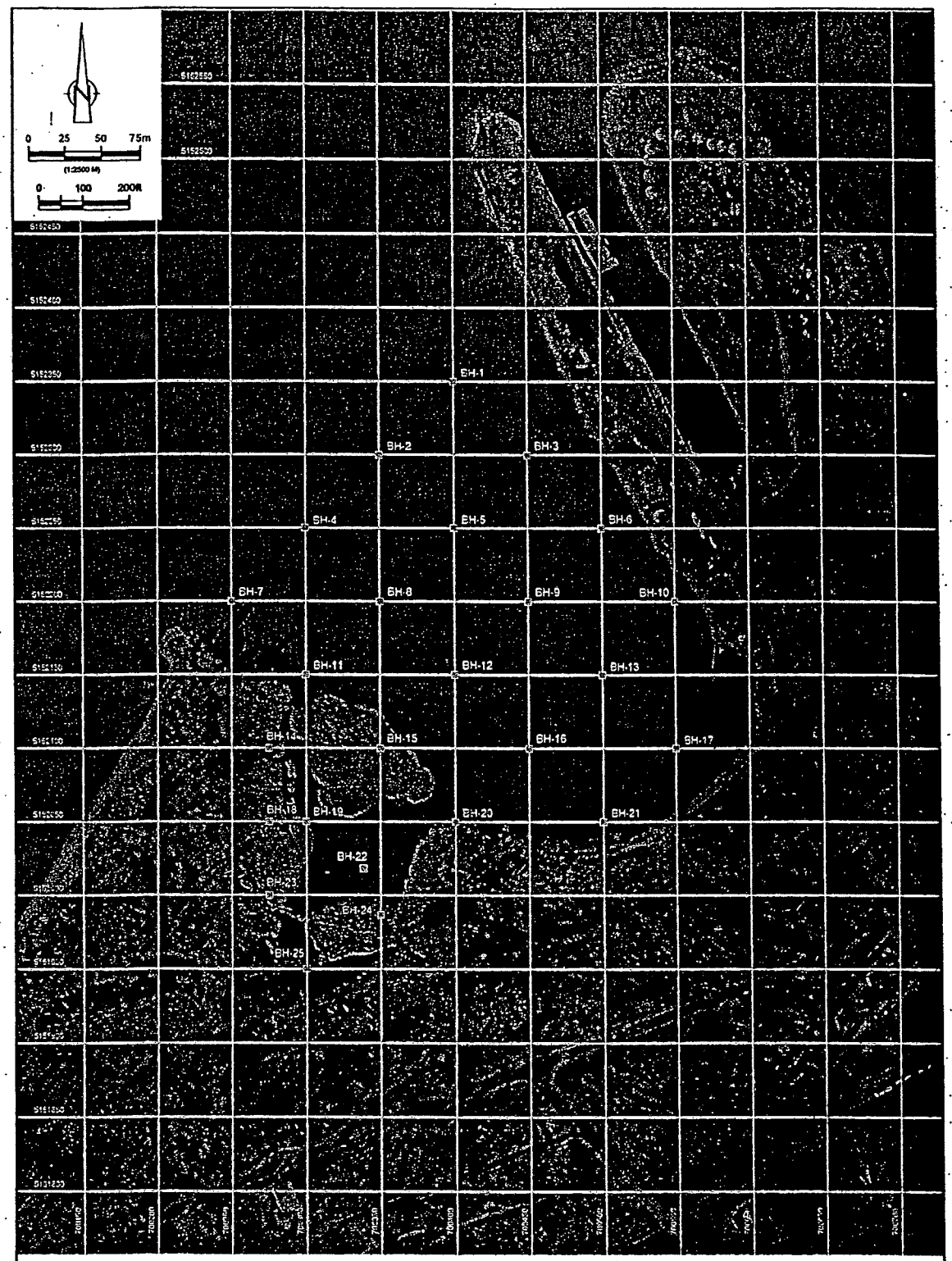
1. This waste is not "Hazardous Waste" as defined by USEPA and/or state regulation
2. This waste does not contain regulated radioactive materials or regulated concentrations of PCB's (Polychlorinated Biphenyls).
3. This waste does not contain regulated concentrations of the following pesticides and herbicides: Chlordane, Endrin, Heptachlor (and it's epoxide), Lindane, Methoxychlor, Toxaphene, 2, 4-D, or 2, 4, 5-TP (Silvex).
4. The waste does not contain halogenated compounds such as: tetrachloroethylene, trichloroethylene, methylene chloride, 1, 1, 1-trichloroethane, carbon tetrachloride, chloroform, ortho-dichlorobenzene, dichlorodifluromethane, 1, 1, 2-trichloro-1, 2, 2-trifluoroethane, trichlorofluoromethane 1, 1-dichloroethylene, and 1, 2-dichloroethylene at greater than 1% (10,000 ppm) total solvent concentration. This listing includes any combination of the above named halogenated compounds where the total concentration or the sum of the concentrations of the individual compounds exceed 1% or 10,000 ppm on a weight and weight basis.
5. This sheet and the attachements contain true and accurate descriptions of the waste material. All relevant information regarding known or suspected hazards in the possession of the Generator has been disclosed.
6. The analytical data presented herein or attached hereto were derived from testing a representative sample taken in accordance with 40 CFR 261.20(c) or equivalent rules.
7. If any changes occur in the character of the waste, the Generator shall notify the Contractor prior to providing the waste to the Contractor.

* 8. **Signature** _____ 9. **Title** SR. ENVIRONMENTAL ENGINEER

10. **Name (Type or Print)** DAN JOHNSON 11. **Date** 08/11/2005 *

11. **Comments**

Analytical Results (Totals)



LEGEND

BH-1 2004 BOREHOLE LOCATION

figure 2.3
BOREHOLE LOCATIONS
TANNERY BAY REMEDIAL DESIGN
CANNELTON INDUSTRIES SITE
Sault Ste. Marie, Michigan

04093-00(058)GN-WA004 SEP 24/2004

WASTE MANAGEMENT

RIDGEVIEW RECYCLING & DISPOSAL FACILITY
P.O. Box 227
6207 Hempton Lake Road
Whitelaw, WI 54247
(920) 732-4473
(920) 732-3758 Fax

September 9, 2005

Mr. Matt T. Crain
Principal Project Manager
Weston Solutions, Inc.
Suite 500
750 East Bunker Court
Vernon Hills, IL 60061-1450

RE: Disposal Approval: DFT MW 755947 Sediments from Tannery Bay
Cyprus Mines Corporation
1000 South Street
Sault Ste. Marie, MI 49783

Dear Mr. Crain:

Following is a copy of the approval to accept the above referenced special waste for disposal at Waste Management's Dafter Landfill, Dafter, Michigan. Please review the approval and take note of Section II A- Management Methods, and B- Precautions, Conditions or Limitations on the approval. This section identifies the regulatory conditions of the approval and Waste Management's policies and procedures for the disposal of this material.

Thank you for choosing Waste Management - we appreciate your business!! Please don't hesitate to contact me with questions, or if I can be of further assistance. I can be reached at 800/444-7919 ext. 230.

920-732-3758 FAX

Sincerely,
Waste Management of WI, Inc.

Marie Jaszewski

Marie Jaszewski
Industrial Account Manager
Northern Wisconsin and Upper Michigan

cc: Robert Bressan, CRA

WM WASTE MANAGEMENT

NORTHERN REGION
SPECIAL WASTE MANAGEMENT DECISION

Request For Decision: X Initial ___ Renewal ___ High Volume (F.A.P. N/A)

Waste Profile Sheet Code: OFT MW 755941

GENERATOR NAME: Cyprus Mines Corp.

ESTATE: Sault Ste. Marie, Mich ADDRESS: 1000 South St.

SITE NAME(S): Delivered from Tannery Bay

PROPOSED MANAGEMENT FACILITY: Dafter L.F.

PROPOSED INTERMEDIATE TRANSFER FACILITY: N/A

NA REQUESTER: Marie Jaszewski TRANSPORTER: TBD

TECHNICAL MANAGER DECISION: (circle one) APPROVED DISAPPROVED SIGNATURE: Marie Jaszewski

Disapproved, Explain: ___ Check if additional information is attached.

Approved, Complete A,B,C or D Below:

Management Method(s): LANDFILL (COD/SPOSAL)

Precautions, Conditions, or Limitations on Approval: Per the sites Special Waste Plan

Waste must not contain free liquids.

Decision Expiration Date: 12/31/06

SITE MGR. SIGNATURE: [signature] NAME (Print): Richard L. Pager DATE: 8/19/05

IN MANAGEMENT FACILITY SITE MANAGER DECISION (circle one) APPROVED DISAPPROVED

Approved, State Any Special Precautions, Terms, or Limitations

MGR. SIGNATURE: [signature] NAME (Print): [signature] DATE: 9/9/05

IN INTERMEDIATE TRANSFER FACILITY SITE MANAGER DECISION (circle one) APPROVED DISAPPROVED

Approved, State Any Special Precautions, Terms, or Limitations

MGR. SIGNATURE: NAME (Print): DATE:

GENERATOR'S WASTE PROFILE SHEET

Profile Number: MW

Profile History ☐ Renewal ☐ Initial

Renewal Date:

A. Waste Generator Information

1. Generator Name: CYPRUS MINES CORPORATION
2. SIC Code:
3. Facility Street Address: 1000 SOUTH ST.
4. Phone: (602) 366-8567
5. Facility City: SAULT STE.MARIE
6. State/Province: MI
7. Zip/Postal Code: 49783
8. Generator USEPA/Federal ID #:
9. County: CHIPPEWA
10. State/Province ID #:
11. Customer Contact: DAN JOHNSON
12. Customer Phone: (602)366-8567
13. Customer Fax: 602-366-7313

B. Waste Stream Information

1. **Description**

a. Name of Waste: SEDIMENTS FROM TANNERY BAY

b. Process Generating waste: REMEDIATION ACTIVITIES RESULTIN IN THE REMOVAL OF SEDIMENTS FROM TANNERY BAY

c. Color	d. Strong odor (describe):	e. Physical state @ 70°F	f. Layers	g. Free liquid range
BROWN		☐ Solid ☐ Liquid ☐ Gas ☐ Sludge ☒ Other SEDIMENTS ☐ Powder /Dust	☒ Single Layer ☐ Multi-layer	to %
				h. pH: Range 6 to 8

i. Liquid Flash Point: ☐ <73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☒ Not applicable

j. Physical and Chemical Composition (List all constituents [including organics, debris, UHC's, and any incidental or periodic materials] present in any concentration and submit representative sample or analysis)(where non-hazardous organic solvents are present, please explain source):

Constituents	Concentration Range	Constituents	Concentration Range
SEDIMENTS	90%	MISC PPE	.5%
WOOD	3%	SAW DUST (IF REQUIRED)	5%
MISC DEBRIS	1.5%		

NOTE: Wood and misc debris may be transported/disposed separately from sediment

2. **Quantity of Waste**

Estimate Annual Volume 40,000 ☒ Tons ☐ Yards ☐ Drums ☐ Other (specify)

3. **Shipping Information**

a. Packaging: ☒ Bulk Solid ☐ Bulk Liquid ☐ Drum ☐ Other Type/Size: SEMI DUMPS

b. Shipping Frequency: Units 1100 TONS Per: ☐ Month ☐ Quarter ☐ Year ☐ One time ☒ Other DAY

C. Sampling Source

1. **Sampling Source** (e.g., Drum, Lagoon, Pit, Pond, Tank, Vat) SAMPLES WERE EXTRACTED FROM TANNERY BAY WHICH IS THE SOURCE OF CONTAMINATED SEDIMENTS.

D. Representative Sample Certification

1. **Print Sampler's Name:** MR. ROBERT BRESSAN
2. **Sample Date:** TOTAL RESULTS = 8/12/04 TCLP RESULTS = 6/8/05
3. **Sampler's Title:** PROJECT MANAGER
4. **Sampler's Employer (if other than Generator):** CONESTOGA-ROVERS AND ASSOCIATES

The sampler's signature certifies that any sample submitted is representative of the waste describe above pursuant to 40 CFR 261.20© or equivalent rules.

5. **Sampler's Signature** (for CRA) *sig.

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3. This waste does not contain regulated concentrations of the following pesticides and herbicides: Chlordane, Endrin, Heptachlor (and it's epoxide), Lindane, Methoxychlor, Toxaphene, 2, 4-D, or 2, 4, 5-TP (Silvex).
4. The waste does not contain halogenated compounds such as: tetrachloroethylene, trichloroethylene, methylene chloride, 1, 1, 1-trichloroethane, carbon tetrachloride, chloroform, ortho-dichlorobenzene, dichlorodifluromethane, 1, 1, 2-trichloro-1, 2, 2-trifluoroethane, trichlorofluoromethane 1, 1-dichloroethylene, and 1, 2-dichloroethylene at greater than 1% (10,000 ppm) total solvent concentration. This listing includes any combination of the above named halogenated compounds where the total concentration or the sum of the concentrations of the individual compounds exceed 1% or 10,000 ppm on a weight and weight basis.
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7. If any changes occur in the character of the waste, the Generator shall notify the Contractor prior to providing the waste to the Contractor.

* 8. **Signature** _____ 9. **Title** SR. ENVIRONMENTAL ENGINEER

10. **Name (Type or Print)** DAN JOHNSON 11. **Date** 08/11/2005 *

11. **Comments**

Analytical Results (Totals)

WASTE MANAGEMENT

RIDGEVIEW RECYCLING & DISPOSAL FACILITY
P.O. Box 227
6207 Hempton Lake Road
Whitelaw, WI 54247
(920) 732-4473
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September 9, 2005

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Principal Project Manager
Weston Solutions, Inc.
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Vernon Hills, IL 60061-1450

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Thank you for choosing Waste Management - we appreciate your business!! Please don't hesitate to contact me with questions, or if I can be of further assistance. I can be reached at 800/444-7919 ext. 230.

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Sincerely,
Waste Management of WI, Inc.

Marie Jaszewski

Marie Jaszewski
Industrial Account Manager
Northern Wisconsin and Upper Michigan

cc: Robert Bressan, CRA

WM WASTE MANAGEMENT

NORTHERN REGION SPECIAL WASTE MANAGEMENT DECISION

DFT MW 755941
Waste Profile Sheet Code

Request For Decision: X Initial ___ Renewal ___ High Volume (F,A,P,N/A)

GENERATOR NAME: Cyprus Mines Corp. ADDRESS: 1000 South St.

CITY/STATE: Sault Ste. Marie, Mich

SITE NAME(S): Sedimentation from Tannery Bay

PROPOSED MANAGEMENT FACILITY: Dafter L.F.

PROPOSED INTERMEDIATE TRANSFER FACILITY: N/A

WMNA REQUESTER: Marie Jaszewski TRANSPORTER TBD

TECHNICAL MANAGER DECISION: (circle one) APPROVED DISAPPROVED SIGNATURE: Marie Jaszewski

Disapproved, Explain: ___ Check if additional information is attached.

Approved, Complete A,B,C or D Below:

Management Method(s): LANDFILL (CODISPOSAL)

Precautions, Conditions, or Limitations on Approval: Per the sites Special Waste Plan

Waste must not contain free liquids.

Decision Expiration Date: 12/31/06

TECH MGR. SIGNATURE: [signature] NAME (Print): Richard L. Pager DATE: 9/9/05

WM MANAGEMENT FACILITY SITE MANAGER DECISION (circle one) APPROVED DISAPPROVED

Approved, State Any Special Precautions, Waivers, or Limitations

MGR. SIGNATURE: [signature] NAME (Print): [signature] DATE: 9/9/05

WM INTERMEDIATE TRANSFER FACILITY SITE MANAGER DECISION (circle one) APPROVED DISAPPROVED

Approved, State Any Special Precautions, Waivers, or Limitations

MGR. SIGNATURE: ___ NAME (Print) ___ DATE: ___

GENERATOR'S WASTE PROFILE SHEET

Profile Number: MW

Profile History ☐ Renewal ☐ Initial
Renewal Date:

A. Waste Generator Information

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7. Zip/Postal Code: 49783
8. Generator USEPA/Federal ID #:
9. County: CHIPPEWA
10. State/Province ID #:
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   b. Process Generating waste: REMEDIATION ACTIVITIES RESULTIN IN THE REMOVAL OF SEDIMENTS FROM TANNERY BAY

c. Color	d. Strong odor (describe):	e. Physical state @ 70°F	f. Layers	g. Free liquid range
BROWN		☐ Solid ☐ Liquid ☐ Gas ☐ Sludge ☒ Other SEDIMENTS ☐ Powder /Dust	☒ Single Layer ☐ Multi-layer	to % h. pH: Range 6 to 8

i. Liquid Flash Point: ☐ <73°F ☐ 73-99°F ☐ 100-139°F ☐ 140-199°F ☐ ≥ 200°F ☒ Not applicable

j. Physical and Chemical Composition (List all constituents [including organics, debris, UHC's, and any incidental or periodic materials] present in any concentration and submit representative sample or analysis)(where non-hazardous organic solvents are present, please explain source):

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WOOD	3%	SAW DUST (IF REQUIRED)	5%
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NOTE: Wood and misc debris may be transported/disposed separately from sediment

2. **Quantity of Waste**
   Estimate Annual Volume 40,000 ☒ Tons ☐ Yards ☐ Drums ☐ Other (specify)
3. **Shipping Information**
   a. Packaging: ☒ Bulk Solid ☐ Bulk Liquid ☐ Drum ☐ Other Type/Size: SEMI DUMPS
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1. **Print Sampler's Name:** MR. ROBERT BRESSAN
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4. **Sampler's Employer (if other than Generator):** CONESTOGA-ROVERS AND ASSOCIATES
   The sampler's signature certifies that any sample submitted is representative of the waste describe above pursuant to 40 CFR 261.20© or equivalent rules.
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4. The waste does not contain halogenated compounds such as: tetrachloroethylene, trichloroethylene, methylene chloride, 1, 1, 1-trichloroethane, carbon tetrachloride, chloroform, ortho-dichlorobenzene, dichlorodifluromethane, 1, 1, 2-trichloro-1, 2, 2-trifluoroethane, trichlorofluoromethane 1, 1-dichloroethylene, and 1, 2-dichloroethylene at greater than 1% (10,000 ppm) total solvent concentration. This listing includes any combination of the above named halogenated compounds where the total concentration or the sum of the concentrations of the individual compounds exceed 1% or 10,000 ppm on a weight and weight basis.
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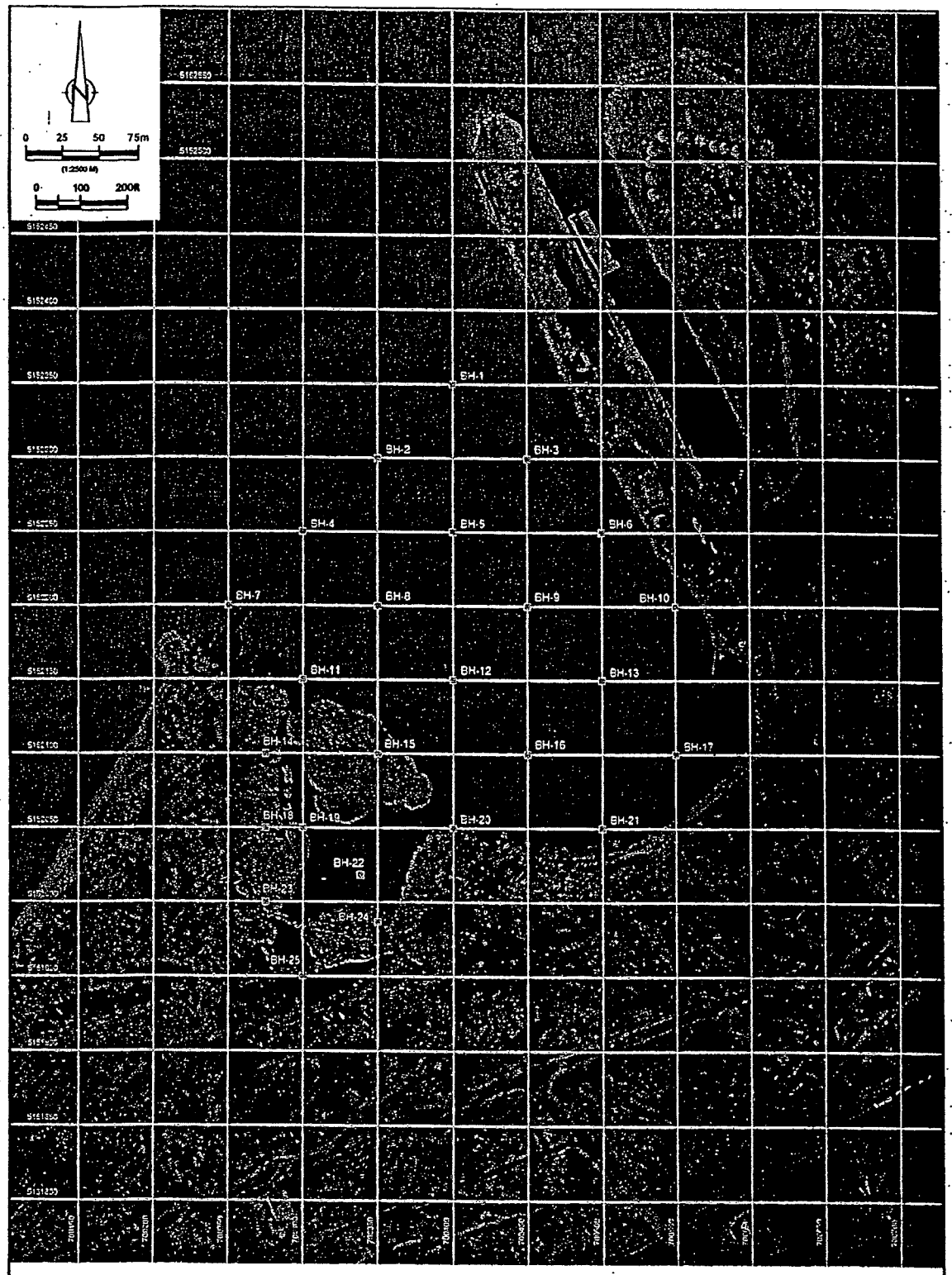
* 8. **Signature** _____ 9. **Title** SR. ENVIRONMENTAL ENGINEER

10. **Name (Type or Print)** DAN JOHNSON 11. **Date** 08/11/2005 *

11. **Comments**

Analytical Results (Totals)



LEGEND

BH-1 2004 BOREHOLE LOCATION

figure 2.3
BOREHOLE LOCATIONS
TANNERY BAY REMEDIAL DESIGN
CANNELTON INDUSTRIES SITE
Sault Ste. Marie, Michigan

04093-00(058)GN-WA004 SEP 24/2004

TABLE 2.1

SAMPLE KEY
CANNELTON SITE
SAULT STE. MARIE, MICHIGAN

Sample Location	Sample Identification	Layer: Overlying Sand	Layer: Organic Material	Layer: Underlying Sand	Comments
BH-1	SS-4093-081104-RB-002A	X			Hold
	SS-4093-081104-RB-002B			X	
BH-2	SS-4093-081104-RB-021A	X			
	SS-4093-081104-RB-021B	X			Duplicate of 021A
BH-3	SS-4093-081104-RB-003	X			
BH-4	SS-4093-081104-RB-020		X		MS/MSD
BH-5	SS-4093-081104-RB-022A	X			
	SS-4093-081104-RB-022B			X	
	SS-4093-081104-RB-022C			X	Duplicate of 022B
BH-6	SS-4093-081104-RB-024A		X		
	SS-4093-081104-RB-024B			X	Hold
BH-7	SS-4093-081104-RB-019	X			
BH-8	SS-4093-081104-RB-009A		X		
	SS-4093-081104-RB-009B			X	
BH-9	SS-4093-081104-RB-023		X		
BH-10	SS-4093-081104-RB-001			X	
BH-11	SS-4093-081104-RB-018A	X			
	SS-4093-081104-RB-018B			X	Hold
BH-12	SS-4093-081104-RB-008A	X			
	SS-4093-081104-RB-008B		X		
BH-13	SS-4093-081104-RB-007A		X		
	SS-4093-081104-RB-007B			X	Hold
BH-14	SS-4093-081104-RB-016		X		
BH-15	SS-4093-081104-RB-017A		X*		
	SS-4093-081104-RB-017B		X*		Duplicate of 017A
BH-16	SS-4093-081104-RB-006A	X			
	SS-4093-081104-RB-006B		X		
BH-17	SS-4093-081104-RB-004A		X		
	SS-4093-081104-RB-004B			X	
BH-18	SS-4093-081104-RB-015A	X			
	SS-4093-081104-RB-015B	X			Duplicate of 015A
BH-19	SS-4093-081104-RB-014A		X		
	SS-4093-081104-RB-014B			X	
BH-20	SS-4093-081104-RB-010A		X		
	SS-4093-081104-RB-010B			X	MS/MSD
BH-21	SS-4093-081104-RB-005A		X		
	SS-4093-081104-RB-005B			X	Hold
BH-22	SS-4093-081104-RB-012		X		
BH-24	SS-4093-081104-RB-011A		X		
	SS-4093-081104-RB-011B			X	Hold
BH-25	SS-4093-081104-RB-013A		X		
	SS-4093-081104-RB-013B			X	Hold
NW Corner	WS-4093-081104-RB-030		NA		Wood Sample
SW Corner	WS-4093-081104-RB-031		NA		Wood Sample
SE Corner	WS-4093-081104-RB-032		NA		Wood Sample

NOTES:

[ ] Grey Sand
* Peat Moss

APPENDIX B

ANALYTICAL DATA

SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 4093-20

CANNELTON INDUSTRIES

Lot #: A4H140178

Paul Wiseman

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

for: Amy L. McCormick
Project Manager

September 14, 2004

CASE NARRATIVE
A4H140178

The following report contains the analytical results for thirty-eight solid samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the Cannelton Industries Site, project number 4093-20. The samples were received August 14, 2004, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to the Chemistry Department on August 27, 2004. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Amy L. McCormick, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 3.7, 1.9, and 2.6°C.

CASE NARRATIVE (continued)

SAMPLE RECEIVING (continued)

See STL's Cooler Receipt Form for additional information.

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive of mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analyte(s).

Matrix spike recovery and relative percent difference (RPD) data were not calculated for some analytes for SS-4093-081304-RB-020 due to the sample concentration reading greater than four times the spike amount. See the Matrix Spike Report for the affected analytes which will be flagged with "NC, MSB".

The matrix spike/matrix spike duplicate(s) for SS-4093-081204-RB-010B had recoveries outside acceptance limits. However, since the associated method blank(s) and laboratory control sample(s) were in control, no corrective action was necessary.

GENERAL CHEMISTRY

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive of mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#100439), Kansas (#E10336), Louisiana (#04112), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

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EXECUTIVE SUMMARY - Detection Highlights

A4H140178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-081104-RB-001 08/11/04 001				
Arsenic	2.4 J	0.66	mg/kg	SW846 6020
Cadmium	0.71	0.13	mg/kg	SW846 6020
Chromium	264	0.66	mg/kg	SW846 6010B
Lead	6.5	1.3	mg/kg	SW846 6010B
Total Organic Carbon	25	3	g/kg	SW846 9060
Percent Solids	75.5	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-002B W 08/11/04 003				
Arsenic	2.0 J	0.67	mg/kg	SW846 6020
Cadmium	0.21	0.13	mg/kg	SW846 6020
Mercury	0.16	0.13	mg/kg	SW846 7471A
Chromium	770	0.67	mg/kg	SW846 6010B
Lead	8.0	1.3	mg/kg	SW846 6010B
Total Organic Carbon	9	3	g/kg	SW846 9060
Percent Solids	75.1	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-003 08/11/04 004				
Arsenic	4.3 J	0.65	mg/kg	SW846 6020
Cadmium	0.70	0.13	mg/kg	SW846 6020
Mercury	0.18	0.13	mg/kg	SW846 7471A
Chromium	1630	0.65	mg/kg	SW846 6010B
Lead	15.5	1.3	mg/kg	SW846 6010B
Total Organic Carbon	5	3	g/kg	SW846 9060
Percent Solids	76.9	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-004A W 08/11/04 005				
Arsenic	5.6 J	1.3	mg/kg	SW846 6020
Cadmium	2.5	0.25	mg/kg	SW846 6020
Mercury	0.37	0.25	mg/kg	SW846 7471A
Chromium	3970	1.3	mg/kg	SW846 6010B
Lead	44.7	2.5	mg/kg	SW846 6010B
Total Organic Carbon	78	5	g/kg	SW846 9060
Percent Solids	39.9	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-004B SILT 08/11/04 006				
Arsenic	0.71 J	0.59	mg/kg	SW846 6020
Cadmium	0.023 B	0.12	mg/kg	SW846 6020
Chromium	10.3	0.59	mg/kg	SW846 6010B
Lead	2.0	1.2	mg/kg	SW846 6010B

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EXECUTIVE SUMMARY - Detection Highlights

A4H140178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-081104-RB-004B SILT 08/11/04 006				
Hexavalent Chromium	0.32 B	0.95	mg/kg	SW846 7196A
Total Organic Carbon	3	2	g/kg	SW846 9060
Percent Solids	84.4	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-005A W 08/11/04 007				
Arsenic	4.8 J	1.1	mg/kg	SW846 6020
Cadmium	2.5	0.22	mg/kg	SW846 6020
Mercury	0.42	0.22	mg/kg	SW846 7471A
Chromium	4420	1.1	mg/kg	SW846 6010B
Lead	45.8	2.2	mg/kg	SW846 6010B
Total Organic Carbon	100	4	g/kg	SW846 9060
Percent Solids	45.9	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-006A 08/11/04 009				
Arsenic	6.0 J	0.73	mg/kg	SW846 6020
Cadmium	1.1	0.15	mg/kg	SW846 6020
Mercury	0.36	0.15	mg/kg	SW846 7471A
Chromium	2260	0.73	mg/kg	SW846 6010B
Lead	24.8	1.5	mg/kg	SW846 6010B
Total Organic Carbon	43	3	g/kg	SW846 9060
Percent Solids	68.2	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-006B W 08/11/04 010				
Arsenic	5.0 J	1.1	mg/kg	SW846 6020
Cadmium	5.3	0.21	mg/kg	SW846 6020
Mercury	0.94	0.21	mg/kg	SW846 7471A
Chromium	12900	10.7	mg/kg	SW846 6010B
Lead	131	2.1	mg/kg	SW846 6010B
Total Organic Carbon	250	4	g/kg	SW846 9060
Percent Solids	46.6	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-007A W 08/11/04 011				
Arsenic	5.1 J	0.83	mg/kg	SW846 6020
Cadmium	1.5	0.17	mg/kg	SW846 6020
Mercury	0.31	0.17	mg/kg	SW846 7471A
Chromium	2620	0.83	mg/kg	SW846 6010B
Lead	28.4	1.7	mg/kg	SW846 6010B
Total Organic Carbon	54	3	g/kg	SW846 9060

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4H140178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-081104-RB-007A W 08/11/04 011				
Percent Solids	60.2	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-008A 08/11/04 013				
Arsenic	1.1 J	0.62	mg/kg	SW846 6020
Cadmium	1.6	0.12	mg/kg	SW846 6020
Mercury	0.20	0.12	mg/kg	SW846 7471A
Chromium	2100	0.62	mg/kg	SW846 6010B
Lead	16.4	1.2	mg/kg	SW846 6010B
Total Organic Carbon	6	2	g/kg	SW846 9060
Percent Solids	80.1	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-008B W 08/11/04 014				
Arsenic	3.6 J	0.66	mg/kg	SW846 6020
Cadmium	1.1	0.13	mg/kg	SW846 6020
Mercury	0.18	0.13	mg/kg	SW846 7471A
Chromium	2060	0.66	mg/kg	SW846 6010B
Lead	22.5	1.3	mg/kg	SW846 6010B
Total Organic Carbon	24	3	g/kg	SW846 9060
Percent Solids	76.3	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-009A W 08/11/04 015				
Arsenic	1.0 J	0.83	mg/kg	SW846 6020
Cadmium	0.52	0.17	mg/kg	SW846 6020
Mercury	0.26	0.17	mg/kg	SW846 7471A
Chromium	5990	0.83	mg/kg	SW846 6010B
Lead	71.0	1.7	mg/kg	SW846 6010B
Total Organic Carbon	400	3	g/kg	SW846 9060
Percent Solids	60.4	10.0	%	MCAWW 160.3 MOD
SS-4093-081104-RB-009B 08/11/04 016				
Arsenic	0.47 B,J	0.64	mg/kg	SW846 6020
Cadmium	0.019 B	0.13	mg/kg	SW846 6020
Chromium	8.0	0.64	mg/kg	SW846 6010B
Lead	1.7	1.3	mg/kg	SW846 6010B
Total Organic Carbon	0.9 B	3	g/kg	SW846 9060
Percent Solids	77.9	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

A4H140178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-081204-RB-010A W 08/12/04 017				
Arsenic	4.0 J	0.69	mg/kg	SW846 6020
Cadmium	0.51	0.14	mg/kg	SW846 6020
Chromium	891	0.69	mg/kg	SW846 6010B
Lead	8.1	1.4	mg/kg	SW846 6010B
Total Organic Carbon	18	3	g/kg	SW846 9060
Percent Solids	72.4	10.0	%	MCAWW 160.3 MOD
SS-4093-081204-RB-010B 08/12/04 018				
Arsenic	0.43 B,J	0.62	mg/kg	SW846 6020
Cadmium	0.018 B	0.12	mg/kg	SW846 6020
Chromium	13.0	0.62	mg/kg	SW846 6010B
Hexavalent Chromium	0.51 B	1.0	mg/kg	SW846 7196A
Total Organic Carbon	2	2	g/kg	SW846 9060
Percent Solids	80.2	10.0	%	MCAWW 160.3 MOD
SS-4093-081204-RB-011A W 08/12/04 019				
Arsenic	3.1 J	1.4	mg/kg	SW846 6020
Cadmium	1.5	0.29	mg/kg	SW846 6020
Mercury	0.63	0.29	mg/kg	SW846 7471A
Chromium	569	1.4	mg/kg	SW846 6010B
Lead	11.2	2.9	mg/kg	SW846 6010B
Total Organic Carbon	470	6	g/kg	SW846 9060
Percent Solids	34.5	10.0	%	MCAWW 160.3 MOD
SS-4093-081204-RB-012 W 08/12/04 021				
Arsenic	16.1 J	1.4	mg/kg	SW846 6020
Cadmium	13.8	0.28	mg/kg	SW846 6020
Mercury	1.3	0.28	mg/kg	SW846 7471A
Chromium	12200	1.4	mg/kg	SW846 6010B
Lead	125	2.8	mg/kg	SW846 6010B
Total Organic Carbon	320	6	g/kg	SW846 9060
Percent Solids	36.1	10.0	%	MCAWW 160.3 MOD
SS-4093-081204-RB-013A W 08/12/04 022				
Arsenic	7.5 J	2.2	mg/kg	SW846 6020
Cadmium	8.2	0.45	mg/kg	SW846 6020
Mercury	0.84	0.45	mg/kg	SW846 7471A
Chromium	6780	2.2	mg/kg	SW846 6010B

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EXECUTIVE SUMMARY - Detection Highlights

A4H140178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-081204-RB-013A W 08/12/04 022				
Lead	91.0	4.5	mg/kg	SW846 6010B
Total Organic Carbon	650	9	g/kg	SW846 9060
Percent Solids	22.5	10.0	%	MCAWW 160.3 MOD
SS-4093-081204-RB-014A W 08/12/04 024				
Arsenic	7.6 J	1.4	mg/kg	SW846 6020
Cadmium	8.8	0.29	mg/kg	SW846 6020
Mercury	1.0	0.29	mg/kg	SW846 7471A
Chromium	8740	1.4	mg/kg	SW846 6010B
Lead	102	2.9	mg/kg	SW846 6010B
Total Organic Carbon	210	6	g/kg	SW846 9060
Percent Solids	34.7	10.0	%	MCAWW 160.3 MOD
SS-4093-081204-RB-014B 08/12/04 025				
Arsenic	0.37 B,J	0.63	mg/kg	SW846 6020
Cadmium	0.013 B	0.13	mg/kg	SW846 6020
Chromium	9.4	0.63	mg/kg	SW846 6010B
Total Organic Carbon	1 B	3	g/kg	SW846 9060
Percent Solids	79.4	10.0	%	MCAWW 160.3 MOD
SS-4093-081204-RB-015A 08/12/04 026				
Arsenic	0.67 J	0.61	mg/kg	SW846 6020
Cadmium	0.023 B	0.12	mg/kg	SW846 6020
Chromium	33.8	0.61	mg/kg	SW846 6010B
Lead	1.5	1.2	mg/kg	SW846 6010B
Total Organic Carbon	0.9 B	2	g/kg	SW846 9060
Percent Solids	81.7	10.0	%	MCAWW 160.3 MOD
SS-4093-081204-RB-015B 08/12/04 027				
Arsenic	0.61 B,J	0.64	mg/kg	SW846 6020
Cadmium	0.061 B	0.13	mg/kg	SW846 6020
Chromium	91.7	0.64	mg/kg	SW846 6010B
Lead	2.0	1.3	mg/kg	SW846 6010B
Total Organic Carbon	0.7 B	3	g/kg	SW846 9060
Percent Solids	78.3	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

A4H140178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-081204-RB-016 W 08/12/04 028				
Arsenic	9.6 J	2.5	mg/kg	SW846 6020
Cadmium	10.3	0.49	mg/kg	SW846 6020
Mercury	1.1	0.49	mg/kg	SW846 7471A
Chromium	11700	2.5	mg/kg	SW846 6010B
Lead	112	4.9	mg/kg	SW846 6010B
Total Organic Carbon	930	10	g/kg	SW846 9060
Percent Solids	20.4	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-017A W 08/13/04 029				
Arsenic	6.2 J	1.2	mg/kg	SW846 6020
Cadmium	4.7	0.24	mg/kg	SW846 6020
Mercury	2.0	0.24	mg/kg	SW846 7471A
Chromium	7820	1.2	mg/kg	SW846 6010B
Lead	107	2.4	mg/kg	SW846 6010B
Total Organic Carbon	180	5	g/kg	SW846 9060
Percent Solids	40.9	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-017B W 08/13/04 030				
Arsenic	17.2 J	2.9	mg/kg	SW846 6020
Cadmium	25.7	0.57	mg/kg	SW846 6020
Mercury	1.4	0.57	mg/kg	SW846 7471A
Chromium	6610	2.9	mg/kg	SW846 6010B
Lead	98.0	5.7	mg/kg	SW846 6010B
Total Organic Carbon	1300	11	g/kg	SW846 9060
Percent Solids	17.4	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-018A 08/13/04 031				
Arsenic	3.0 J	0.79	mg/kg	SW846 6020
Cadmium	0.88	0.16	mg/kg	SW846 6020
Chromium	1580	0.79	mg/kg	SW846 6010B
Lead	17.3	1.6	mg/kg	SW846 6010B
Total Organic Carbon	36	3	g/kg	SW846 9060
Percent Solids	63.4	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-019 08/13/04 033				
Arsenic	2.1 J	0.80	mg/kg	SW846 6020
Cadmium	0.29	0.16	mg/kg	SW846 6020
Chromium	2220	0.80	mg/kg	SW846 6010B
Lead	34.2	1.6	mg/kg	SW846 6010B

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EXECUTIVE SUMMARY - Detection Highlights

A4H140178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-081304-RB-019 08/13/04 033				
Total Organic Carbon	32	3	g/kg	SW846 9060
Percent Solids	62.4	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-020 08/13/04 034				
Arsenic	0.88 J	0.71	mg/kg	SW846 6020
Cadmium	0.18	0.14	mg/kg	SW846 6020
Mercury	0.16	0.14	mg/kg	SW846 7471A
Chromium	1500	0.71	mg/kg	SW846 6010B
Lead	12.1	1.4	mg/kg	SW846 6010B
Total Organic Carbon	10	3	g/kg	SW846 9060
Percent Solids	70.3	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-021A 08/13/04 035				
Arsenic	0.79 J	0.64	mg/kg	SW846 6020
Cadmium	0.11 B	0.13	mg/kg	SW846 6020
Chromium	1480	0.64	mg/kg	SW846 6010B
Lead	16.8	1.3	mg/kg	SW846 6010B
Total Organic Carbon	8	3	g/kg	SW846 9060
Percent Solids	77.9	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-021B 08/13/04 036				
Arsenic	0.89 J	0.64	mg/kg	SW846 6020
Cadmium	0.11 B	0.13	mg/kg	SW846 6020
Chromium	1930	0.64	mg/kg	SW846 6010B
Lead	17.6	1.3	mg/kg	SW846 6010B
Total Organic Carbon	4	3	g/kg	SW846 9060
Percent Solids	78.2	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-022A 08/13/04 037				
Arsenic	1.0 J	0.65	mg/kg	SW846 6020
Cadmium	0.070 B	0.13	mg/kg	SW846 6020
Chromium	872	0.65	mg/kg	SW846 6010B
Lead	11.7	1.3	mg/kg	SW846 6010B
Total Organic Carbon	9	3	g/kg	SW846 9060
Percent Solids	76.5	10.0	%	MCAWW 160.3 MOD

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EXECUTIVE SUMMARY - Detection Highlights

A4H140178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-081304-RB-022B 08/13/04 038				
Arsenic	0.23 B,J	0.63	mg/kg	SW846 6020
Cadmium	0.0089 B	0.13	mg/kg	SW846 6020
Chromium	2.6	0.63	mg/kg	SW846 6010B
Total Organic Carbon	0.6 B	3	g/kg	SW846 9060
Percent Solids	78.9	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-022C 08/13/04 039				
Arsenic	0.18 B,J	0.62	mg/kg	SW846 6020
Cadmium	0.0099 B	0.12	mg/kg	SW846 6020
Chromium	4.0	0.62	mg/kg	SW846 6010B
Hexavalent Chromium	0.26 B	1.0	mg/kg	SW846 7196A
Total Organic Carbon	0.6 B	2	g/kg	SW846 9060
Percent Solids	80.2	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-023 08/13/04 040				
Arsenic	3.8 J	0.72	mg/kg	SW846 6020
Cadmium	2.0	0.14	mg/kg	SW846 6020
Mercury	0.54	0.14	mg/kg	SW846 7471A
Chromium	3140	0.72	mg/kg	SW846 6010B
Lead	32.6	1.4	mg/kg	SW846 6010B
Total Organic Carbon	35	3	g/kg	SW846 9060
Percent Solids	69.1	10.0	%	MCAWW 160.3 MOD
SS-4093-081304-RB-024A 08/13/04 041				
Arsenic	3.8 J	0.69	mg/kg	SW846 6020
Cadmium	0.76	0.14	mg/kg	SW846 6020
Mercury	0.29	0.14	mg/kg	SW846 7471A
Chromium	2390	0.69	mg/kg	SW846 6010B
Lead	26.8	1.4	mg/kg	SW846 6010B
Total Organic Carbon	23	3	g/kg	SW846 9060
Percent Solids	72.1	10.0	%	MCAWW 160.3 MOD
WS-4093-081304-RB-030 08/13/04 043				
Arsenic	2.5 J	1.7	mg/kg	SW846 6020
Cadmium	0.39	0.34	mg/kg	SW846 6020
Chromium	156	1.7	mg/kg	SW846 6010B
Total Organic Carbon	1700	7	g/kg	SW846 9060
Percent Solids	29.3	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A4H140178

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
WS-4093-081304-RB-031 08/13/04 044				
Arsenic	0.72 B,J	2.4	mg/kg	SW846 6020
Cadmium	0.22 B	0.49	mg/kg	SW846 6020
Chromium	125	2.4	mg/kg	SW846 6010B
Total Organic Carbon	2800	10	g/kg	SW846 9060
Percent Solids	20.4	10.0	%	MCAWW 160.3 MOD
WS-4093-081304-RB-032 08/13/04 045				
Arsenic	7.7 J	4.1	mg/kg	SW846 6020
Cadmium	0.58 B	0.81	mg/kg	SW846 6020
Chromium	478	4.1	mg/kg	SW846 6010B
Total Organic Carbon	4200	16	g/kg	SW846 9060
Percent Solids	12.3	10.0	%	MCAWW 160.3 MOD

ANALYTICAL METHODS SUMMARY

A4H140178

PARAMETER	ANALYTICAL METHOD
Hexavalent Chromium	SW846 7196A
ICP-MS (6020)	SW846 6020
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A
Total Organic Carbon	SW846 9060
Total Residue as Percent Solids	MCAWW 160.3 MOD
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A4H140178

WO #	SAMPLE#	CLIENT SAMPLE ID		SAMPLED DATE	SAMP TIME
GM6X5	001	SS-4093-081104-RB-001		08/11/04	
GM601	003	SS-4093-081104-RB-002B	W	08/11/04	
GM602	004	SS-4093-081104-RB-003		08/11/04	
GM603	005	SS-4093-081104-RB-004A	W	08/11/04	
GM605	006	SS-4093-081104-RB-004B	SILT	08/11/04	
GM607	007	SS-4093-081104-RB-005A	W	08/11/04	
GM61F	009	SS-4093-081104-RB-006A		08/11/04	
GM61J	010	SS-4093-081104-RB-006B	W	08/11/04	
GM61L	011	SS-4093-081104-RB-007A	W	08/11/04	
GM61P	013	SS-4093-081104-RB-008A		08/11/04	
GM61R	014	SS-4093-081104-RB-008B	W	08/11/04	
GM61T	015	SS-4093-081104-RB-009A	W	08/11/04	
GM61V	016	SS-4093-081104-RB-009B		08/12/04	
GM613	017	SS-4093-081204-RB-010A	W	08/12/04	
GM616	018	SS-4093-081204-RB-010B		08/12/04	
GM617	019	SS-4093-081204-RB-011A	W	08/12/04	
GM62D	021	SS-4093-081204-RB-012	W	08/12/04	
GM62P	022	SS-4093-081204-RB-013A	W	08/12/04	
GM62X	024	SS-4093-081204-RB-014A	W	08/12/04	
GM620	025	SS-4093-081204-RB-014B		08/12/04	
GM623	026	SS-4093-081204-RB-015A		08/12/04	
GM625	027	SS-4093-081204-RB-015B		08/12/04	
GM626	028	SS-4093-081204-RB-016	W	08/13/04	
GM629	029	SS-4093-081304-RB-017A	W	08/13/04	
GM63C	030	SS-4093-081304-RB-017B	W	08/13/04	
GM63D	031	SS-4093-081304-RB-018A		08/13/04	
GM63H	033	SS-4093-081304-RB-019		08/13/04	
GM63N	034	SS-4093-081304-RB-020		08/13/04	
GM63Q	035	SS-4093-081304-RB-021A		08/13/04	
GM63V	036	SS-4093-081304-RB-021B		08/13/04	
GM63W	037	SS-4093-081304-RB-022A		08/13/04	
GM63X	038	SS-4093-081304-RB-022B		08/13/04	
GM632	039	SS-4093-081304-RB-022C		08/13/04	
GM633	040	SS-4093-081304-RB-023		08/13/04	
GM634	041	SS-4093-081304-RB-024A		08/13/04	
GM636	043	WS-4093-081304-RB-030		08/13/04	

(Continued on next page)

SAMPLE SUMMARY

A4H140178

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GM639	044	WS-4093-081304-RB-031	08/13/04	
GM64A	045	WS-4093-081304-RB-032	08/13/04	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081104-RB-001

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-001 Date Received..: 08/14/04
Date Sampled...: 08/11/04
% Moisture.....: 24

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	ND	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM6X51AF
		Dilution Factor: 1		MDL.....: 0.0060		
Chromium	264	0.66	mg/kg	SW846 6010B	08/17-08/23/04	GM6X51AC
		Dilution Factor: 1		MDL.....: 0.16		
Lead	6.5	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM6X51AD
		Dilution Factor: 1		MDL.....: 0.30		
Prep Batch #...: 4231079						
Arsenic	2.4 J	0.66	mg/kg	SW846 6020	08/18-08/19/04	GM6X51AJ
		Dilution Factor: 1		MDL.....: 0.029		
Cadmium	0.71	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM6X51AK
		Dilution Factor: 1		MDL.....: 0.0069		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-002B W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-003
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 25

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.16	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM6011AF
		Dilution Factor: 1		MDL.....: 0.0060		
Chromium	770	0.67	mg/kg	SW846 6010B	08/17-08/23/04	GM6011AC
		Dilution Factor: 1		MDL.....: 0.16		
Lead	8.0	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM6011AD
		Dilution Factor: 1		MDL.....: 0.31		
Prep Batch #...: 4231079						
Arsenic	2.0 J	0.67	mg/kg	SW846 6020	08/18-08/19/04	GM6011AJ
		Dilution Factor: 1		MDL.....: 0.029		
Cadmium	0.21	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM6011AK
		Dilution Factor: 1		MDL.....: 0.0069		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-003

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-004 Date Received..: 08/14/04
Date Sampled...: 08/11/04
% Moisture.....: 23

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.18	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM6021AF
		Dilution Factor: 1		MDL.....: 0.0059		
Chromium	1630	0.65	mg/kg	SW846 6010B	08/17-08/23/04	GM6021AC
		Dilution Factor: 1		MDL.....: 0.16		
Lead	15.5	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM6021AD
		Dilution Factor: 1		MDL.....: 0.30		
Prep Batch #...: 4231079						
Arsenic	4.3 J	0.65	mg/kg	SW846 6020	08/18-08/19/04	GM6021AJ
		Dilution Factor: 1		MDL.....: 0.029		
Cadmium	0.70	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM6021AK
		Dilution Factor: 1		MDL.....: 0.0068		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-004A W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-005 Date Received..: 08/14/04
Date Sampled...: 08/11/04
% Moisture.....: 60

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.37	0.25 Dilution Factor: 1	mg/kg	SW846 7471A MDL.....: 0.011	08/17-08/18/04	GM6031AF
Chromium	3970	1.3 Dilution Factor: 1	mg/kg	SW846 6010B MDL.....: 0.30	08/17-08/23/04	GM6031AC
Lead	44.7	2.5 Dilution Factor: 1	mg/kg	SW846 6010B MDL.....: 0.58	08/17-08/23/04	GM6031AD
Prep Batch #...: 4231079						
Arsenic	5.6 J	1.3 Dilution Factor: 1	mg/kg	SW846 6020 MDL.....: 0.055	08/18-08/19/04	GM6031AJ
Cadmium	2.5	0.25 Dilution Factor: 1	mg/kg	SW846 6020 MDL.....: 0.013	08/18-08/19/04	GM6031AK

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-004B SILT

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-006
Date Sampled...: 08/11/04
% Moisture.....: 16

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	ND	0.12	mg/kg	SW846 7471A	08/17-08/18/04	GM6051AF
		Dilution Factor: 1		MDL.....: 0.0053		
Chromium	10.3	0.59	mg/kg	SW846 6010B	08/17-08/23/04	GM6051AC
		Dilution Factor: 1		MDL.....: 0.14		
Lead	2.0	1.2	mg/kg	SW846 6010B	08/17-08/23/04	GM6051AD
		Dilution Factor: 1		MDL.....: 0.27		
Prep Batch #...: 4231079						
Arsenic	0.71 J	0.59	mg/kg	SW846 6020	08/18-08/19/04	GM6051AJ
		Dilution Factor: 1		MDL.....: 0.026		
Cadmium	0.023 B	0.12	mg/kg	SW846 6020	08/18-08/19/04	GM6051AK
		Dilution Factor: 1		MDL.....: 0.0062		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-005A W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-007
Date Sampled...: 08/11/04
% Moisture.....: 54

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.42	0.22	mg/kg	SW846 7471A	08/17-08/18/04	GM6071AF
		Dilution Factor: 1		MDL.....: 0.0098		
Chromium	4420	1.1	mg/kg	SW846 6010B	08/17-08/23/04	GM6071AC
		Dilution Factor: 1		MDL.....: 0.26		
Lead	45.8	2.2	mg/kg	SW846 6010B	08/17-08/23/04	GM6071AD
		Dilution Factor: 1		MDL.....: 0.50		
Prep Batch #...: 4231079						
Arsenic	4.8 J	1.1	mg/kg	SW846 6020	08/18-08/19/04	GM6071AJ
		Dilution Factor: 1		MDL.....: 0.048		
Cadmium	2.5	0.22	mg/kg	SW846 6020	08/18-08/19/04	GM6071AK
		Dilution Factor: 1		MDL.....: 0.011		

NOTE(S):
Results and reporting limits have been adjusted for dry weight.
J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-006A

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-009
Date Sampled...: 08/11/04
% Moisture.....: 32

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.36	0.15	mg/kg	SW846 7471A	08/17-08/18/04	GM61F1AF
		Dilution Factor: 1		MDL.....: 0.0066		
Chromium	2260	0.73	mg/kg	SW846 6010B	08/17-08/23/04	GM61F1AC
		Dilution Factor: 1		MDL.....: 0.18		
Lead	24.8	1.5	mg/kg	SW846 6010B	08/17-08/23/04	GM61F1AD
		Dilution Factor: 1		MDL.....: 0.34		
Prep Batch #...: 4231079						
Arsenic	6.0 J	0.73	mg/kg	SW846 6020	08/18-08/19/04	GM61F1AJ
		Dilution Factor: 1		MDL.....: 0.032		
Cadmium	1.1	0.15	mg/kg	SW846 6020	08/18-08/19/04	GM61F1AK
		Dilution Factor: 1		MDL.....: 0.0076		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-006B W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-010
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 53

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.94	0.21	mg/kg	SW846 7471A	08/17-08/18/04	GM61J1AF
		Dilution Factor: 1		MDL.....: 0.0097		
Chromium	12900	10.7	mg/kg	SW846 6010B	08/17-08/24/04	GM61J1AC
		Dilution Factor: 10		MDL.....: 2.6		
Lead	131	2.1	mg/kg	SW846 6010B	08/17-08/23/04	GM61J1AD
		Dilution Factor: 1		MDL.....: 0.49		
Prep Batch #...: 4231079						
Arsenic	5.0 J	1.1	mg/kg	SW846 6020	08/18-08/19/04	GM61J1AJ
		Dilution Factor: 1		MDL.....: 0.047		
Cadmium	5.3	0.21	mg/kg	SW846 6020	08/18-08/19/04	GM61J1AK
		Dilution Factor: 1		MDL.....: 0.011		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-007A W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-011
Date Sampled...: 08/11/04
% Moisture.....: 40

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.31	0.17	mg/kg	SW846 7471A	08/17-08/18/04	GM61L1AF
		Dilution Factor: 1		MDL.....: 0.0075		
Chromium	2620	0.83	mg/kg	SW846 6010B	08/17-08/23/04	GM61L1AC
		Dilution Factor: 1		MDL.....: 0.20		
Lead	28.4	1.7	mg/kg	SW846 6010B	08/17-08/23/04	GM61L1AD
		Dilution Factor: 1		MDL.....: 0.38		
Prep Batch #...: 4231079						
Arsenic	5.1 J	0.83	mg/kg	SW846 6020	08/18-08/19/04	GM61L1AJ
		Dilution Factor: 1		MDL.....: 0.037		
Cadmium	1.5	0.17	mg/kg	SW846 6020	08/18-08/19/04	GM61L1AK
		Dilution Factor: 1		MDL.....: 0.0086		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081104-RB-008A

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-013
Date Sampled...: 08/11/04
% Moisture.....: 20

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.20	0.12	mg/kg	SW846 7471A	08/17-08/18/04	GM61P1AF
		Dilution Factor: 1		MDL.....: 0.0056		
Chromium	2100	0.62	mg/kg	SW846 6010B	08/17-08/23/04	GM61P1AC
		Dilution Factor: 1		MDL.....: 0.15		
Lead	16.4	1.2	mg/kg	SW846 6010B	08/17-08/23/04	GM61P1AD
		Dilution Factor: 1		MDL.....: 0.29		
Prep Batch #...: 4231079						
Arsenic	1.1 J	0.62	mg/kg	SW846 6020	08/18-08/19/04	GM61P1AJ
		Dilution Factor: 1		MDL.....: 0.027		
Cadmium	1.6	0.12	mg/kg	SW846 6020	08/18-08/19/04	GM61P1AK
		Dilution Factor: 1		MDL.....: 0.0065		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-008B W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-014 Date Received..: 08/14/04
Date Sampled...: 08/11/04
% Moisture.....: 24

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.18	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM61R1AF
		Dilution Factor: 1		MDL.....: 0.0059		
Chromium	2060	0.66	mg/kg	SW846 6010B	08/17-08/23/04	GM61R1AC
		Dilution Factor: 1		MDL.....: 0.16		
Lead	22.5	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM61R1AD
		Dilution Factor: 1		MDL.....: 0.30		
Prep Batch #...: 4231079						
Arsenic	3.6 J	0.66	mg/kg	SW846 6020	08/18-08/19/04	GM61R1AJ
		Dilution Factor: 1		MDL.....: 0.029		
Cadmium	1.1	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM61R1AK
		Dilution Factor: 1		MDL.....: 0.0068		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-009A W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-015
Date Sampled...: 08/11/04
% Moisture.....: 40

Date Received...: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.26	0.17 Dilution Factor: 1	mg/kg	SW846 7471A MDL.....: 0.0075	08/17-08/18/04	GM61T1AF
Chromium	5990	0.83 Dilution Factor: 1	mg/kg	SW846 6010B MDL.....: 0.20	08/17-08/23/04	GM61T1AC
Lead	71.0	1.7 Dilution Factor: 1	mg/kg	SW846 6010B MDL.....: 0.38	08/17-08/23/04	GM61T1AD
Prep Batch #...: 4231079						
Arsenic	1.0 J	0.83 Dilution Factor: 1	mg/kg	SW846 6020 MDL.....: 0.036	08/18-08/19/04	GM61T1AJ
Cadmium	0.52	0.17 Dilution Factor: 1	mg/kg	SW846 6020 MDL.....: 0.0086	08/18-08/19/04	GM61T1AK

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-009B

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-016
Date Sampled...: 08/11/04
% Moisture.....: 22

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	ND	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM61V1AF
		Dilution Factor: 1		MDL.....: 0.0058		
Chromium	8.0	0.64	mg/kg	SW846 6010B	08/17-08/23/04	GM61V1AC
		Dilution Factor: 1		MDL.....: 0.15		
Lead	1.7	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM61V1AD
		Dilution Factor: 1		MDL.....: 0.30		
Prep Batch #...: 4231079						
Arsenic	0.47 B,J	0.64	mg/kg	SW846 6020	08/18-08/19/04	GM61V1AJ
		Dilution Factor: 1		MDL.....: 0.028		
Cadmium	0.019 B	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM61V1AK
		Dilution Factor: 1		MDL.....: 0.0067		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-010A W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-017 Date Received..: 08/14/04
Date Sampled...: 08/12/04
% Moisture.....: 28

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	ND	0.14	mg/kg	SW846 7471A	08/17-08/18/04	GM6131AF
		Dilution Factor: 1		MDL.....: 0.0062		
Chromium	891	0.69	mg/kg	SW846 6010B	08/17-08/23/04	GM6131AC
		Dilution Factor: 1		MDL.....: 0.17		
Lead	8.1	1.4	mg/kg	SW846 6010B	08/17-08/23/04	GM6131AD
		Dilution Factor: 1		MDL.....: 0.32		
Prep Batch #...: 4231079						
Arsenic	4.0 J	0.69	mg/kg	SW846 6020	08/18-08/19/04	GM6131AJ
		Dilution Factor: 1		MDL.....: 0.030		
Cadmium	0.51	0.14	mg/kg	SW846 6020	08/18-08/19/04	GM6131AK
		Dilution Factor: 1		MDL.....: 0.0072		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-010B

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-018
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 20

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	ND	0.12	mg/kg	SW846 7471A	08/17-08/18/04	GM6161AP
		Dilution Factor: 1		MDL.....: 0.0056		
Chromium	13.0	0.62	mg/kg	SW846 6010B	08/17-08/23/04	GM6161AK
		Dilution Factor: 1		MDL.....: 0.15		
Lead	ND	1.2	mg/kg	SW846 6010B	08/17-08/23/04	GM6161AH
		Dilution Factor: 1		MDL.....: 0.29		
Prep Batch #...: 4231079						
Arsenic	0.43 B,J	0.62	mg/kg	SW846 6020	08/18-08/19/04	GM6161AX
		Dilution Factor: 1		MDL.....: 0.027		
Cadmium	0.018 B	0.12	mg/kg	SW846 6020	08/18-08/19/04	GM6161A2
		Dilution Factor: 1		MDL.....: 0.0065		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081204-RB-011A W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-019
Date Sampled...: 08/12/04
% Moisture.....: 65

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.63	0.29	mg/kg	SW846 7471A	08/17-08/18/04	GM6171AF
		Dilution Factor: 1		MDL.....: 0.013		
Chromium	569	1.4	mg/kg	SW846 6010B	08/17-08/23/04	GM6171AC
		Dilution Factor: 1		MDL.....: 0.35		
Lead	11.2	2.9	mg/kg	SW846 6010B	08/17-08/23/04	GM6171AD
		Dilution Factor: 1		MDL.....: 0.67		
Prep Batch #...: 4231079						
Arsenic	3.1 J	1.4	mg/kg	SW846 6020	08/18-08/19/04	GM6171AJ
		Dilution Factor: 1		MDL.....: 0.064		
Cadmium	1.5	0.29	mg/kg	SW846 6020	08/18-08/19/04	GM6171AK
		Dilution Factor: 1		MDL.....: 0.015		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-012 W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-021
Date Sampled...: 08/12/04
% Moisture.....: 64

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	1.3	0.28	mg/kg	SW846 7471A	08/17-08/18/04	GM62D1AF
		Dilution Factor: 1		MDL.....: 0.012		
Chromium	12200	1.4	mg/kg	SW846 6010B	08/17-08/23/04	GM62D1AC
		Dilution Factor: 1		MDL.....: 0.33		
Lead	125	2.8	mg/kg	SW846 6010B	08/17-08/23/04	GM62D1AD
		Dilution Factor: 1		MDL.....: 0.64		
Prep Batch #...: 4231079						
Arsenic	16.1 J	1.4	mg/kg	SW846 6020	08/18-08/19/04	GM62D1AJ
		Dilution Factor: 1		MDL.....: 0.061		
Cadmium	13.8	0.28	mg/kg	SW846 6020	08/18-08/19/04	GM62D1AK
		Dilution Factor: 1		MDL.....: 0.014		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J. Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-013A W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-022
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 78

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	0.84	0.45	mg/kg	SW846 7471A	08/17-08/18/04	GM62P1AF
		Dilution Factor: 1		MDL.....: 0.020		
Chromium	6780	2.2	mg/kg	SW846 6010B	08/17-08/23/04	GM62P1AC
		Dilution Factor: 1		MDL.....: 0.53		
Lead	91.0	4.5	mg/kg	SW846 6010B	08/17-08/23/04	GM62P1AD
		Dilution Factor: 1		MDL.....: 1.0		
Prep Batch #...: 4231079						
Arsenic	7.5 J	2.2	mg/kg	SW846 6020	08/18-08/19/04	GM62P1AJ
		Dilution Factor: 1		MDL.....: 0.098		
Cadmium	8.2	0.45	mg/kg	SW846 6020	08/18-08/19/04	GM62P1AK
		Dilution Factor: 1		MDL.....: 0.023		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-014A W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-024
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 65

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	1.0	0.29	mg/kg	SW846 7471A	08/17-08/18/04	GM62X1AF
		Dilution Factor: 1		MDL.....: 0.013		
Chromium	8740	1.4	mg/kg	SW846 6010B	08/17-08/23/04	GM62X1AC
		Dilution Factor: 1		MDL.....: 0.35		
Lead	102	2.9	mg/kg	SW846 6010B	08/17-08/23/04	GM62X1AD
		Dilution Factor: 1		MDL.....: 0.66		
Prep Batch #...: 4231079						
Arsenic	7.6 J	1.4	mg/kg	SW846 6020	08/18-08/19/04	GM62X1AJ
		Dilution Factor: 1		MDL.....: 0.063		
Cadmium	8.8	0.29	mg/kg	SW846 6020	08/18-08/19/04	GM62X1AK
		Dilution Factor: 1		MDL.....: 0.015		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-014B

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-025
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 21

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230017						
Mercury	ND	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM6201AF
		Dilution Factor: 1		MDL.....: 0.0057		
Chromium	9.4	0.63	mg/kg	SW846 6010B	08/17-08/23/04	GM6201AC
		Dilution Factor: 1		MDL.....: 0.15		
Lead	ND	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM6201AD
		Dilution Factor: 1		MDL.....: 0.29		
Prep Batch #...: 4231079						
Arsenic	0.37 B,J	0.63	mg/kg	SW846 6020	08/18-08/19/04	GM6201AJ
		Dilution Factor: 1		MDL.....: 0.028		
Cadmium	0.013 B	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM6201AK
		Dilution Factor: 1		MDL.....: 0.0066		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081204-RB-015A

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-026
Date Sampled...: 08/12/04
% Moisture.....: 18

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.12	mg/kg	SW846 7471A	08/17-08/18/04	GM6231AF
		Dilution Factor: 1		MDL.....: 0.0055		
Chromium	33.8	0.61	mg/kg	SW846 6010B	08/17-08/23/04	GM6231AC
		Dilution Factor: 1		MDL.....: 0.15		
Lead	1.5	1.2	mg/kg	SW846 6010B	08/17-08/23/04	GM6231AD
		Dilution Factor: 1		MDL.....: 0.28		
Prep Batch #...: 4231083						
Arsenic	0.67 J	0.61	mg/kg	SW846 6020	08/18-08/19/04	GM6231AJ
		Dilution Factor: 1		MDL.....: 0.027		
Cadmium	0.023 B	0.12	mg/kg	SW846 6020	08/18-08/19/04	GM6231AK
		Dilution Factor: 1		MDL.....: 0.0064		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-015B

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-027
Date Sampled...: 08/12/04
% Moisture.....: 22

Date Received..: 08/14/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.13	mg/kg	SW846 7471A MDL.....: 0.0057	08/17-08/18/04	GM6251AF
		Dilution Factor: 1				
Chromium	91.7	0.64	mg/kg	SW846 6010B MDL.....: 0.15	08/17-08/23/04	GM6251AC
		Dilution Factor: 1				
Lead	2.0	1.3	mg/kg	SW846 6010B MDL.....: 0.29	08/17-08/23/04	GM6251AD
		Dilution Factor: 1				
Prep Batch #...: 4231083						
Arsenic	0.61 B,J	0.64	mg/kg	SW846 6020 MDL.....: 0.028	08/18-08/19/04	GM6251AJ
		Dilution Factor: 1				
Cadmium	0.061 B	0.13	mg/kg	SW846 6020 MDL.....: 0.0066	08/18-08/19/04	GM6251AK
		Dilution Factor: 1				

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-016 W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-028
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 80

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	1.1	0.49	mg/kg	SW846 7471A	08/17-08/18/04	GM6261AF
		Dilution Factor: 1		MDL.....: 0.022		
Chromium	11700	2.5	mg/kg	SW846 6010B	08/17-08/23/04	GM6261AC
		Dilution Factor: 1		MDL.....: 0.59		
Lead	112	4.9	mg/kg	SW846 6010B	08/17-08/23/04	GM6261AD
		Dilution Factor: 1		MDL.....: 1.1		
Prep Batch #...: 4231083						
Arsenic	9.6 J	2.5	mg/kg	SW846 6020	08/18-08/19/04	GM6261AJ
		Dilution Factor: 1		MDL.....: 0.11		
Cadmium	10.3	0.49	mg/kg	SW846 6020	08/18-08/19/04	GM6261AK
		Dilution Factor: 1		MDL.....: 0.026		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-017A W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-029
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 59

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	2.0	0.24	mg/kg	SW846 7471A	08/17-08/18/04	GM6291AF
		Dilution Factor: 1		MDL.....: 0.011		
Chromium	7820	1.2	mg/kg	SW846 6010B	08/17-08/23/04	GM6291AC
		Dilution Factor: 1		MDL.....: 0.29		
Lead	107	2.4	mg/kg	SW846 6010B	08/17-08/23/04	GM6291AD
		Dilution Factor: 1		MDL.....: 0.56		
Prep Batch #...: 4231083						
Arsenic	6.2 J	1.2	mg/kg	SW846 6020	08/18-08/19/04	GM6291AJ
		Dilution Factor: 1		MDL.....: 0.054		
Cadmium	4.7	0.24	mg/kg	SW846 6020	08/18-08/19/04	GM6291AK
		Dilution Factor: 1		MDL.....: 0.013		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-017B W

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-030
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 83

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	1.4	0.57	mg/kg	SW846 7471A	08/17-08/18/04	GM63C1AF
		Dilution Factor: 1		MDL.....: 0.026		
Chromium	6610	2.9	mg/kg	SW846 6010B	08/17-08/23/04	GM63C1AC
		Dilution Factor: 1		MDL.....: 0.69		
Lead	98.0	5.7	mg/kg	SW846 6010B	08/17-08/23/04	GM63C1AD
		Dilution Factor: 1		MDL.....: 1.3		
Prep Batch #...: 4231083						
Arsenic	17.2 J	2.9	mg/kg	SW846 6020	08/18-08/19/04	GM63C1AJ
		Dilution Factor: 1		MDL.....: 0.13		
Cadmium	25.7	0.57	mg/kg	SW846 6020	08/18-08/19/04	GM63C1AK
		Dilution Factor: 1		MDL.....: 0.030		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-018A

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-031
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 37

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.16	mg/kg	SW846 7471A	08/17-08/18/04	GM63D1AF
		Dilution Factor: 1		MDL.....: 0.0071		
Chromium	1580	0.79	mg/kg	SW846 6010B	08/17-08/23/04	GM63D1AC
		Dilution Factor: 1		MDL.....: 0.19		
Lead	17.3	1.6	mg/kg	SW846 6010B	08/17-08/23/04	GM63D1AD
		Dilution Factor: 1		MDL.....: 0.36		
Prep Batch #...: 4231083						
Arsenic	3.0 J	0.79	mg/kg	SW846 6020	08/18-08/19/04	GM63D1AJ
		Dilution Factor: 1		MDL.....: 0.035		
Cadmium	0.88	0.16	mg/kg	SW846 6020	08/18-08/19/04	GM63D1AK
		Dilution Factor: 1		MDL.....: 0.0082		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-019

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-033
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 38

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.16	mg/kg	SW846 7471A	08/17-08/18/04	GM63H1AF
		Dilution Factor: 1		MDL.....: 0.0072		
Chromium	2220	0.80	mg/kg	SW846 6010B	08/17-08/23/04	GM63H1AC
		Dilution Factor: 1		MDL.....: 0.19		
Lead	34.2	1.6	mg/kg	SW846 6010B	08/17-08/23/04	GM63H1AD
		Dilution Factor: 1		MDL.....: 0.37		
Prep Batch #...: 4231083						
Arsenic	2.1 J	0.80	mg/kg	SW846 6020	08/18-08/19/04	GM63H1AJ
		Dilution Factor: 1		MDL.....: 0.035		
Cadmium	0.29	0.16	mg/kg	SW846 6020	08/18-08/19/04	GM63H1AK
		Dilution Factor: 1		MDL.....: 0.0083		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-020

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-034
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 30

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	0.16	0.14	mg/kg	SW846 7471A	08/17-08/18/04	GM63N1AP
		Dilution Factor: 1		MDL.....: 0.0064		
Chromium	1500	0.71	mg/kg	SW846 6010B	08/17-08/23/04	GM63N1AE
		Dilution Factor: 1		MDL.....: 0.17		
Lead	12.1	1.4	mg/kg	SW846 6010B	08/17-08/23/04	GM63N1AH
		Dilution Factor: 1		MDL.....: 0.33		
Prep Batch #...: 4231083						
Arsenic	0.88 J	0.71	mg/kg	SW846 6020	08/18-08/19/04	GM63N1AX
		Dilution Factor: 1		MDL.....: 0.031		
Cadmium	0.18	0.14	mg/kg	SW846 6020	08/18-08/19/04	GM63N1A2
		Dilution Factor: 1		MDL.....: 0.0074		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-021A

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-035
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 22

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM63Q1AF
		Dilution Factor: 1		MDL.....: 0.0058		
Chromium	1480	0.64	mg/kg	SW846 6010B	08/17-08/23/04	GM63Q1AC
		Dilution Factor: 1		MDL.....: 0.15		
Lead	16.8	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM63Q1AD
		Dilution Factor: 1		MDL.....: 0.30		
Prep Batch #...: 4231083						
Arsenic	0.79 J	0.64	mg/kg	SW846 6020	08/18-08/19/04	GM63Q1AJ
		Dilution Factor: 1		MDL.....: 0.028		
Cadmium	0.11 B	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM63Q1AK
		Dilution Factor: 1		MDL.....: 0.0067		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-021B

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-036
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 22

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM63V1AF
		Dilution Factor: 1		MDL.....: 0.0058		
Chromium	1930	0.64	mg/kg	SW846 6010B	08/17-08/23/04	GM63V1AC
		Dilution Factor: 1		MDL.....: 0.15		
Lead	17.6	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM63V1AD
		Dilution Factor: 1		MDL.....: 0.29		
Prep Batch #...: 4231083						
Arsenic	0.89 J	0.64	mg/kg	SW846 6020	08/18-08/19/04	GM63V1AJ
		Dilution Factor: 1		MDL.....: 0.028		
Cadmium	0.11 B	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM63V1AK
		Dilution Factor: 1		MDL.....: 0.0066		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-022A

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-037
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 24

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM63W1AF
		Dilution Factor: 1		MDL.....: 0.0059		
Chromium	872	0.65	mg/kg	SW846 6010B	08/17-08/23/04	GM63W1AC
		Dilution Factor: 1		MDL.....: 0.16		
Lead	11.7	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM63W1AD
		Dilution Factor: 1		MDL.....: 0.30		
Prep Batch #...: 4231083						
Arsenic	1.0 J	0.65	mg/kg	SW846 6020	08/18-08/19/04	GM63W1AJ
		Dilution Factor: 1		MDL.....: 0.029		
Cadmium	0.070 B	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM63W1AK
		Dilution Factor: 1		MDL.....: 0.0068		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-022B

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-038
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 21

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.13	mg/kg	SW846 7471A	08/17-08/18/04	GM63X1AF
		Dilution Factor: 1		MDL.....: 0.0057		
Chromium	2.6	0.63	mg/kg	SW846 6010B	08/17-08/23/04	GM63X1AC
		Dilution Factor: 1		MDL.....: 0.15		
Lead	ND	1.3	mg/kg	SW846 6010B	08/17-08/23/04	GM63X1AD
		Dilution Factor: 1		MDL.....: 0.29		
Prep Batch #...: 4231083						
Arsenic	0.23 B,J	0.63	mg/kg	SW846 6020	08/18-08/19/04	GM63X1AJ
		Dilution Factor: 1		MDL.....: 0.028		
Cadmium	0.0089 B	0.13	mg/kg	SW846 6020	08/18-08/19/04	GM63X1AK
		Dilution Factor: 1		MDL.....: 0.0066		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-022C

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-039
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 20

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.12	mg/kg	SW846 7471A	08/17-08/18/04	GM6321AF
		Dilution Factor: 1		MDL.....: 0.0056		
Chromium	4.0	0.62	mg/kg	SW846 6010B	08/17-08/23/04	GM6321AC
		Dilution Factor: 1		MDL.....: 0.15		
Lead	ND	1.2	mg/kg	SW846 6010B	08/17-08/23/04	GM6321AD
		Dilution Factor: 1		MDL.....: 0.29		
Prep Batch #...: 4231083						
Arsenic	0.18 B,J	0.62	mg/kg	SW846 6020	08/18-08/19/04	GM6321AJ
		Dilution Factor: 1		MDL.....: 0.027		
Cadmium	0.0099 B	0.12	mg/kg	SW846 6020	08/18-08/19/04	GM6321AK
		Dilution Factor: 1		MDL.....: 0.0065		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-023

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-040
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 31

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	0.54	0.14	mg/kg	SW846 7471A	08/17-08/18/04	GM6331AF
		Dilution Factor: 1		MDL.....: 0.0065		
Chromium	3140	0.72	mg/kg	SW846 6010B	08/17-08/23/04	GM6331AC
		Dilution Factor: 1		MDL.....: 0.17		
Lead	32.6	1.4	mg/kg	SW846 6010B	08/17-08/23/04	GM6331AD
		Dilution Factor: 1		MDL.....: 0.33		
Prep Batch #...: 4231083						
Arsenic	3.8 J	0.72	mg/kg	SW846 6020	08/18-08/19/04	GM6331AJ
		Dilution Factor: 1		MDL.....: 0.032		
Cadmium	2.0	0.14	mg/kg	SW846 6020	08/18-08/19/04	GM6331AK
		Dilution Factor: 1		MDL.....: 0.0075		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-024A

TOTAL Metals

Lot-Sample #...: A4H140178-041
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 28
Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	0.29	0.14	mg/kg	SW846 7471A	08/17-08/18/04	GM6341AF
		Dilution Factor: 1		MDL.....: 0.0062		
Chromium	2390	0.69	mg/kg	SW846 6010B	08/17-08/23/04	GM6341AC
		Dilution Factor: 1		MDL.....: 0.17		
Lead	26.8	1.4	mg/kg	SW846 6010B	08/17-08/23/04	GM6341AD
		Dilution Factor: 1		MDL.....: 0.32		
Prep Batch #...: 4231083						
Arsenic	3.8 J	0.69	mg/kg	SW846 6020	08/18-08/19/04	GM6341AJ
		Dilution Factor: 1		MDL.....: 0.031		
Cadmium	0.76	0.14	mg/kg	SW846 6020	08/18-08/19/04	GM6341AK
		Dilution Factor: 1		MDL.....: 0.0072		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: WS-4093-081304-RB-030

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-043
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 71

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.34	mg/kg	SW846 7471A	08/17-08/18/04	GM6361AF
		Dilution Factor: 1		MDL.....: 0.015		
Chromium	156	1.7	mg/kg	SW846 6010B	08/17-08/23/04	GM6361AC
		Dilution Factor: 1		MDL.....: 0.41		
Lead	ND	3.4	mg/kg	SW846 6010B	08/17-08/23/04	GM6361AD
		Dilution Factor: 1		MDL.....: 0.78		
Prep Batch #...: 4231083						
Arsenic	2.5 J	1.7	mg/kg	SW846 6020	08/18-08/19/04	GM6361AJ
		Dilution Factor: 1		MDL.....: 0.075		
Cadmium	0.39	0.34	mg/kg	SW846 6020	08/18-08/19/04	GM6361AK
		Dilution Factor: 1		MDL.....: 0.018		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: WS-4093-081304-RB-031

TOTAL Metals

Matrix.....: SO

Lot-Sample #...: A4H140178-044
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 80

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.49	mg/kg	SW846 7471A	08/17-08/18/04	GM6391AF
		Dilution Factor: 1		MDL.....: 0.022		
Chromium	125	2.4	mg/kg	SW846 6010B	08/17-08/23/04	GM6391AC
		Dilution Factor: 1		MDL.....: 0.59		
Lead	ND	4.9	mg/kg	SW846 6010B	08/17-08/23/04	GM6391AD
		Dilution Factor: 1		MDL.....: 1.1		
Prep Batch #...: 4231083						
Arsenic	0.72 B,J	2.4	mg/kg	SW846 6020	08/18-08/19/04	GM6391AJ
		Dilution Factor: 1		MDL.....: 0.11		
Cadmium	0.22 B	0.49	mg/kg	SW846 6020	08/18-08/19/04	GM6391AK
		Dilution Factor: 1		MDL.....: 0.025		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: WS-4093-081304-RB-032

TOTAL Metals

Lot-Sample #...: A4H140178-045
Date Sampled...: 08/13/04
% Moisture.....: 88

Date Received..: 08/14/04

Matrix.....: SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4230016						
Mercury	ND	0.81	mg/kg	SW846 7471A	08/17-08/18/04	GM64A1AF
		Dilution Factor: 1		MDL.....: 0.036		
Chromium	478	4.1	mg/kg	SW846 6010B	08/17-08/23/04	GM64A1AC
		Dilution Factor: 1		MDL.....: 0.97		
Lead	ND	8.1	mg/kg	SW846 6010B	08/17-08/23/04	GM64A1AD
		Dilution Factor: 1		MDL.....: 1.9		
Prep Batch #...: 4231083						
Arsenic	7.7 J	4.1	mg/kg	SW846 6020	08/18-08/19/04	GM64A1AJ
		Dilution Factor: 1		MDL.....: 0.18		
Cadmium	0.58 B	0.81	mg/kg	SW846 6020	08/18-08/19/04	GM64A1AK
		Dilution Factor: 1		MDL.....: 0.042		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-001

General Chemistry

Lot-Sample #...: A4H140178-001 Work Order #...: GM6X5 Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 24

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.1	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.26		
Percent Solids	75.5	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	25	3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081104-RB-002B W

General Chemistry

Lot-Sample #...: A4H140178-003 Work Order #...: GM601 Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 25

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.1	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.27		
Percent Solids	75.1	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	9	3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-003

General Chemistry

Lot-Sample #....: A4H140178-004 Work Order #...: GM602 Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 23

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.26		
Percent Solids	76.9	10.0	%	MCANW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon 5		3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081104-RB-004A W

General Chemistry

Lot-Sample #...: A4H140178-005 Work Order #...: GM603 Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 60

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	2.0	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.50		
Percent Solids	39.9	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	78	5	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 1		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081104-RB-004B SILT

General Chemistry

Lot-Sample #...: A4H140178-006 Work Order #...: GM605 Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 16

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	0.32 B	0.95	mg/kg	SW846 7196A MDL.....: 0.24	08/24-08/25/04	4238541
	Dilution Factor: 1					
Percent Solids	84.4	10.0	%	MCAWW 160.3 MOD MDL.....: 10.0	08/17-08/18/04	4230366
	Dilution Factor: 1					
Total Organic Carbon 3		2	g/kg	SW846 9060 MDL.....: 0.5	08/23-08/25/04	4239149
	Dilution Factor: 1					

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081104-RB-005A W

General Chemistry

Lot-Sample #...: A4H140178-007 Work Order #...: GM607 Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 54

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.7	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.44		
Percent Solids	45.9	10.0	%	MCANW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	100	4	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.9		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-006A

General Chemistry

Lot-Sample #...: A4H140178-009 Work Order #...: GM61F Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 32

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.2	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.29		
Percent Solids	68.2	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	43	3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.6		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

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CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-006B W

General Chemistry

Lot-Sample #...: A4H140178-010 Work Order #...: GM61J Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 53

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.7	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.43		
Percent Solids	46.6	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon 250		4	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.9		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081104-RB-007A W

General Chemistry

Lot-Sample #...: A4H140178-011 Work Order #...: GM61L Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 40

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.3	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.33		
Percent Solids	60.2	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	54	3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.7		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-008A

General Chemistry

Lot-Sample #...: A4H140178-013 Work Order #...: GM61P Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 20

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.25		
Percent Solids	80.1	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon 6		2	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081104-RB-008B W

General Chemistry

Lot-Sample #...: A4H140178-014 Work Order #...: GM61R Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 24

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.26		
Percent Solids	76.3	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	24	3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081104-RB-009A W

General Chemistry

Lot-Sample #...: A4H140178-015 Work Order #...: GM61T Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 40

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.3	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.33		
Percent Solids	60.4	10.0	%	MCANW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	400	3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.7		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081104-RB-009B

General Chemistry

Lot-Sample #...: A4H140178-016 Work Order #...: GM61V Matrix.....: SO
Date Sampled...: 08/11/04 Date Received..: 08/14/04
% Moisture.....: 22

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.26		
Percent Solids	77.9	10.0	%	MCANW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	0.9 B	3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081204-RB-010A W

General Chemistry

Lot-Sample #...: A4H140178-017 Work Order #...: GM613 Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 28

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.1	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.28		
Percent Solids	72.4	10.0	%	MCANW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	18	3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.6		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-010B

General Chemistry

Lot-Sample #...: A4H140178-018 Work Order #...: GM616 Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 20

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	0.51 B	1.0	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.25		
Percent Solids	80.2	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon 2		2	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081204-RB-011A W

General Chemistry

Lot-Sample #...: A4H140178-019 Work Order #...: GM617 Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 65

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	2.3	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.58		
Percent Solids	34.5	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	470	6	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 1		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

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CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081204-RB-012 W

General Chemistry

Lot-Sample #...: A4H140178-021 Work Order #...: GM62D Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 64

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	2.2	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.55		
Percent Solids	36.1	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	320	6	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 1		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-013A W

General Chemistry

Lot-Sample #...: A4H140178-022 Work Order #...: GM62P Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 78

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	3.6	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.89		
Percent Solids	22.5	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	650	9	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 2		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081204-RB-014A W

General Chemistry

Lot-Sample #...: A4H140178-024 Work Order #...: GM62X Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 65

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	2.3	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.58		
Percent Solids	34.7	10.0	%	MCANW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	210	6	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 1		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081204-RB-014B

General Chemistry

Lot-Sample #...: A4H140178-025 Work Order #...: GM620 Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 21

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1		MDL.....: 0.25		
Percent Solids	79.4	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon 1 B		3	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081204-RB-015A

General Chemistry

Lot-Sample #...: A4H140178-026 Work Order #...: GM623 Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 18

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.98	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.24		
Percent Solids	81.7	10.0	%	MCANW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	0.9 B	2	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081204-RB-015B

General Chemistry

Lot-Sample #...: A4H140178-027 Work Order #...: GM625 Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 22

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.26		
Percent Solids	78.3	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	0.7 B	3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081204-RB-016 W

General Chemistry

Lot-Sample #...: A4H140178-028 Work Order #...: GM626 Matrix.....: SO
Date Sampled...: 08/12/04 Date Received..: 08/14/04
% Moisture.....: 80

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	3.9	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.98		
Percent Solids	20.4	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	930	10	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 2		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-017A W

General Chemistry

Lot-Sample #...: A4H140178-029 Work Order #...: GM629 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 59

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	2.0	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.49		
Percent Solids	40.9	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	180	5	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 1		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-017B W

General Chemistry

Lot-Sample #...: A4H140178-030 Work Order #...: GM63C Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 83

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	4.6	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 1.1		
Percent Solids	17.4	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	1300	11	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 2		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-018A

General Chemistry

Lot-Sample #...: A4H140178-031 Work Order #...: GM63D Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 37

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.3	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.32		
Percent Solids	63.4	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	36	3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.6		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-019

General Chemistry

Lot-Sample #...: A4H140178-033 Work Order #...: GM63H Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 38

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.3	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.32		
Percent Solids	62.4	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	32	3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.6		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-020

General Chemistry

Lot-Sample #...: A4H140178-034 Work Order #...: GM63N Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 30

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.1	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.28		
Percent Solids	70.3	10.0	%	MCANW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	10	3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.6		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-021A

General Chemistry

Lot-Sample #...: A4H140178-035 Work Order #...: GM63Q Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 22

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.26		
Percent Solids	77.9	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	8	3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-021B

General Chemistry

Lot-Sample #...: A4H140178-036 Work Order #...: GM63V Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 22

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.26		
Percent Solids	78.2	10.0	%	MCANW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	4	3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-022A

General Chemistry

Lot-Sample #...: A4H140178-037 Work Order #...: GM63W Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 24

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.26		
Percent Solids	76.5	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230490
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon 9		3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-022B

General Chemistry

Lot-Sample #...: A4H140178-038 Work Order #...: GM63X Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 21

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.0	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.25		
Percent Solids	78.9	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230490
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	0.6 B	3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-022C

General Chemistry

Lot-Sample #...: A4H140178-039 Work Order #...: GM632 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 20

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	0.26 B	1.0	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.25		
Percent Solids	80.2	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230490
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	0.6 B	2	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.5		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

B Estimated result. Result is less than RL.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: SS-4093-081304-RB-023

General Chemistry

Lot-Sample #...: A4H140178-040 Work Order #...: GM633 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 31

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.2	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.29		
Percent Solids	69.1	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230490
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	35	3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.6		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: SS-4093-081304-RB-024A

General Chemistry

Lot-Sample #...: A4H140178-041 Work Order #...: GM634 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 28

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	1.1	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.28		
Percent Solids	72.1	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230490
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	23	3	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 0.6		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: WS-4093-081304-RB-030

General Chemistry

Lot-Sample #...: A4H140178-043 Work Order #...: GM636 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 71

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	2.7	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.68		
Percent Solids	29.3	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230490
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	1700	7	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 1		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

STL North Canton

CONESTOGA-ROVERS & ASSOC.,INC.

Client Sample ID: WS-4093-081304-RB-031

General Chemistry

Lot-Sample #...: A4H140178-044 Work Order #...: GM639 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 80

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	3.9	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 0.98		
Percent Solids	20.4	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230490
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	2800	10	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 2		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

CONESTOGA-ROVERS & ASSOC., INC.

Client Sample ID: WS-4093-081304-RB-032

General Chemistry

Lot-Sample #...: A4H140178-045 Work Order #...: GM64A Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04
% Moisture.....: 88

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	6.5	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1		MDL.....: 1.6		
Percent Solids	12.3	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230490
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	4200	16	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1		MDL.....: 3		

NOTE(S):
RL Reporting Limit
Results and reporting limits have been adjusted for dry weight.

STL North Canton

SEVERN TRENT STL

QUALITY CONTROL SECTION

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: A4H140178

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A4H170000-016 Prep Batch #...: 4230016						
Mercury	ND	0.10	mg/kg	SW846 7471A	08/17-08/18/04	GM9AK1AF
		Dilution Factor: 1				
Chromium	ND	0.50	mg/kg	SW846 6010B	08/17-08/23/04	GM9AK1AC
		Dilution Factor: 1				
Lead	ND	1.0	mg/kg	SW846 6010B	08/17-08/23/04	GM9AK1AD
		Dilution Factor: 1				
MB Lot-Sample #: A4H170000-017 Prep Batch #...: 4230017						
Mercury	ND	0.10	mg/kg	SW846 7471A	08/17-08/18/04	GM9AM1AF
		Dilution Factor: 1				
Chromium	ND	0.50	mg/kg	SW846 6010B	08/17-08/23/04	GM9AM1AC
		Dilution Factor: 1				
Lead	ND	1.0	mg/kg	SW846 6010B	08/17-08/23/04	GM9AM1AD
		Dilution Factor: 1				
MB Lot-Sample #: A4H180000-079 Prep Batch #...: 4231079						
Arsenic	0.074 B	0.50	mg/kg	SW846 6020	08/18-08/19/04	GNDD71AA
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/kg	SW846 6020	08/18-08/19/04	GNDD71AC
		Dilution Factor: 1				
MB Lot-Sample #: A4H180000-083 Prep Batch #...: 4231083						
Arsenic	0.055 B	0.50	mg/kg	SW846 6020	08/18-08/19/04	GNDEF1AA
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/kg	SW846 6020	08/18-08/19/04	GNDEF1AC
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A4H140178

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A4H170000-016 Prep Batch #...: 4230016							
Mercury	0.83	0.84	mg/kg	101	SW846 7471A	08/17-08/18/04	GM9AK1AL
			Dilution Factor: 1				
Chromium	20.0	17.8	mg/kg	89	SW846 6010B	08/17-08/23/04	GM9AK1AH
			Dilution Factor: 1				
Lead	50.0	43.0	mg/kg	86	SW846 6010B	08/17-08/23/04	GM9AK1AJ
			Dilution Factor: 1				
LCS Lot-Sample#: A4H170000-017 Prep Batch #...: 4230017							
Mercury	0.83	0.87	mg/kg	104	SW846 7471A	08/17-08/18/04	GM9AM1AL
			Dilution Factor: 1				
Chromium	20.0	17.9	mg/kg	89	SW846 6010B	08/17-08/23/04	GM9AM1AH
			Dilution Factor: 1				
Lead	50.0	43.5	mg/kg	87	SW846 6010B	08/17-08/23/04	GM9AM1AJ
			Dilution Factor: 1				
LCS Lot-Sample#: A4H180000-079 Prep Batch #...: 4231079							
Arsenic	10.0	9.0	mg/kg	90	SW846 6020	08/18-08/19/04	GNDD71AD
			Dilution Factor: 1				
Cadmium	10.0	8.4	mg/kg	84	SW846 6020	08/18-08/19/04	GNDD71AE
			Dilution Factor: 1				
LCS Lot-Sample#: A4H180000-083 Prep Batch #...: 4231083							
Arsenic	10.0	8.6	mg/kg	86	SW846 6020	08/18-08/19/04	GNDEF1AD
			Dilution Factor: 1				
Cadmium	10.0	8.4	mg/kg	84	SW846 6020	08/18-08/19/04	GNDEF1AE
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A4H140178 Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A4H170000-016 Prep Batch #...: 4230016					
Mercury	101	(74 - 122)	SW846 7471A Dilution Factor: 1	08/17-08/18/04	GM9AK1AL
Chromium	89	(80 - 120)	SW846 6010B Dilution Factor: 1	08/17-08/23/04	GM9AK1AH
Lead	86	(80 - 120)	SW846 6010B Dilution Factor: 1	08/17-08/23/04	GM9AK1AJ
LCS Lot-Sample#: A4H170000-017 Prep Batch #...: 4230017					
Mercury	104	(74 - 122)	SW846 7471A Dilution Factor: 1	08/17-08/18/04	GM9AM1AL
Chromium	89	(80 - 120)	SW846 6010B Dilution Factor: 1	08/17-08/23/04	GM9AM1AH
Lead	87	(80 - 120)	SW846 6010B Dilution Factor: 1	08/17-08/23/04	GM9AM1AJ
LCS Lot-Sample#: A4H180000-079 Prep Batch #...: 4231079					
Arsenic	90	(74 - 110)	SW846 6020 Dilution Factor: 1	08/18-08/19/04	GNDD71AD
Cadmium	84	(73 - 110)	SW846 6020 Dilution Factor: 1	08/18-08/19/04	GNDD71AE
LCS Lot-Sample#: A4H180000-083 Prep Batch #...: 4231083					
Arsenic	86	(74 - 110)	SW846 6020 Dilution Factor: 1	08/18-08/19/04	GNDEF1AD
Cadmium	84	(73 - 110)	SW846 6020 Dilution Factor: 1	08/18-08/19/04	GNDEF1AE

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A4H140178 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A4H140178-034 Prep Batch #...: 4230016									
Mercury									
	0.16	0.24	0.40	mg/kg	102		SW846 7471A	08/17-08/18/04	GM63N1AQ
	0.16	0.24	0.42	mg/kg	110	5.2	SW846 7471A	08/17-08/18/04	GM63N1AR
			Dilution Factor: 1						
Chromium									
	1500	28.5	1330	mg/kg			SW846 6010B	08/17-08/23/04	GM63N1AF
			Qualifiers: NC,MSB						
	1500	28.5	1320	mg/kg			SW846 6010B	08/17-08/23/04	GM63N1AG
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
Lead									
	12.1	71.2	69.3	mg/kg	80		SW846 6010B	08/17-08/23/04	GM63N1AJ
	12.1	71.2	68.5	mg/kg	79	1.1	SW846 6010B	08/17-08/23/04	GM63N1AK
			Dilution Factor: 1						
MS Lot-Sample #: A4H140178-034 Prep Batch #...: 4231083									
Arsenic									
	0.88	14.2	13.3	mg/kg	87		SW846 6020	08/18-08/19/04	GM63N1A0
	0.88	14.2	13.8	mg/kg	91	3.7	SW846 6020	08/18-08/19/04	GM63N1A1
			Dilution Factor: 5						
Cadmium									
	0.18	14.2	12.7	mg/kg	88		SW846 6020	08/18-08/19/04	GM63N1A3
	0.18	14.2	12.9	mg/kg	89	1.4	SW846 6020	08/18-08/19/04	GM63N1A4
			Dilution Factor: 5						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A4H140178 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A4H140178-034 Prep Batch #...: 4230016							
Mercury	102	(10 - 199)			SW846 7471A	08/17-08/18/04	GM63N1AQ
	110	(10 - 199)	5.2	(0-50)	SW846 7471A	08/17-08/18/04	GM63N1AR
		Dilution Factor: 1					
Chromium	NC,MSB	(75 - 125)			SW846 6010B	08/17-08/23/04	GM63N1AF
	NC,MSB	(75 - 125)		(0-20)	SW846 6010B	08/17-08/23/04	GM63N1AG
		Dilution Factor: 1					
Lead	80	(75 - 125)			SW846 6010B	08/17-08/23/04	GM63N1AJ
	79	(75 - 125)	1.1	(0-20)	SW846 6010B	08/17-08/23/04	GM63N1AK
		Dilution Factor: 1					
MS Lot-Sample #: A4H140178-034 Prep Batch #...: 4231083							
Arsenic	87	(70 - 130)			SW846 6020	08/18-08/19/04	GM63N1A0
	91	(70 - 130)	3.7	(0-20)	SW846 6020	08/18-08/19/04	GM63N1A1
		Dilution Factor: 5					
Cadmium	88	(70 - 130)			SW846 6020	08/18-08/19/04	GM63N1A3
	89	(70 - 130)	1.4	(0-20)	SW846 6020	08/18-08/19/04	GM63N1A4
		Dilution Factor: 5					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: A4H140178
Date Sampled...: 08/12/04 Date Received..: 08/14/04 Matrix.....: SO

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A4H140178-018 Prep Batch #...: 4230017									
Mercury									
	ND	0.21	0.23	mg/kg	106		SW846 7471A	08/17-08/18/04	GM6161AQ
	ND	0.21	0.23	mg/kg	106	0.36	SW846 7471A	08/17-08/18/04	GM6161AR
			Dilution Factor: 1						
Chromium									
	13.0	24.9	28.6 N	mg/kg	62		SW846 6010B	08/17-08/23/04	GM6161AF
	13.0	24.9	28.1 N	mg/kg	60	1.9	SW846 6010B	08/17-08/23/04	GM6161AG
			Dilution Factor: 1						
Lead									
	ND	62.4	53.3	mg/kg	84		SW846 6010B	08/17-08/23/04	GM6161AJ
	ND	62.4	52.9	mg/kg	83	0.71	SW846 6010B	08/17-08/23/04	GM6161AK
			Dilution Factor: 1						
MS Lot-Sample #: A4H140178-018 Prep Batch #...: 4231079									
Arsenic									
	0.43	12.5	11.3	mg/kg	87		SW846 6020	08/18-08/19/04	GM6161A0
	0.43	12.5	11.6	mg/kg	89	2.6	SW846 6020	08/18-08/19/04	GM6161A1
			Dilution Factor: 5						
Cadmium									
	0.018	12.5	10.9	mg/kg	88		SW846 6020	08/18-08/19/04	GM6161A3
	0.018	12.5	11.0	mg/kg	88	0.75	SW846 6020	08/18-08/19/04	GM6161A4
			Dilution Factor: 5						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: A4H140178
Date Sampled...: 08/12/04 Date Received..: 08/14/04 Matrix.....: SO

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A4H140178-018 Prep Batch #...: 4230017							
Mercury	106	(10 - 199)			SW846 7471A	08/17-08/18/04	GM6161AQ
	106	(10 - 199)	0.36	(0-50)	SW846 7471A	08/17-08/18/04	GM6161AR
		Dilution Factor: 1					
Chromium	62 N	(75 - 125)			SW846 6010B	08/17-08/23/04	GM6161AF
	60 N	(75 - 125)	1.9	(0-20)	SW846 6010B	08/17-08/23/04	GM6161AG
		Dilution Factor: 1					
Lead	84	(75 - 125)			SW846 6010B	08/17-08/23/04	GM6161AJ
	83	(75 - 125)	0.71	(0-20)	SW846 6010B	08/17-08/23/04	GM6161AK
		Dilution Factor: 1					
MS Lot-Sample #: A4H140178-018 Prep Batch #...: 4231079							
Arsenic	87	(70 - 130)			SW846 6020	08/18-08/19/04	GM6161A0
	89	(70 - 130)	2.6	(0-20)	SW846 6020	08/18-08/19/04	GM6161A1
		Dilution Factor: 5					
Cadmium	88	(70 - 130)			SW846 6020	08/18-08/19/04	GM6161A3
	88	(70 - 130)	0.75	(0-20)	SW846 6020	08/18-08/19/04	GM6161A4
		Dilution Factor: 5					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

Results and reporting limits have been adjusted for dry weight.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A4H140178

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
		Work Order #: GNXKH1AA		MB Lot-Sample #:	A4H250000-541	
Hexavalent Chromium	ND	0.80	mg/kg	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1				
		Work Order #: GN28A1AA		MB Lot-Sample #:	A4H250000-543	
Hexavalent Chromium	ND	0.80	mg/kg	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1				
		Work Order #: GND6D1AA		MB Lot-Sample #:	A4H170000-366	
Percent Solids	ND	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230366
		Dilution Factor: 1				
		Work Order #: GND661AA		MB Lot-Sample #:	A4H170000-368	
Percent Solids	ND	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230368
		Dilution Factor: 1				
		Work Order #: GNC6D1AA		MB Lot-Sample #:	A4H170000-490	
Percent Solids	ND	10.0	%	MCAWW 160.3 MOD	08/17-08/18/04	4230490
		Dilution Factor: 1				
		Work Order #: GNX711AA		MB Lot-Sample #:	D4H260000-149	
Total Organic Carbon	ND	2	g/kg	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1				
		Work Order #: GNX701AA		MB Lot-Sample #:	D4H260000-156	
Total Organic Carbon	ND	2	g/kg	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A4H140178 Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium			Work Order #: GNXXH1AC LCS Lot-Sample#: A4H250000-541				
	644	506	mg/kg	79	SW846 7196A	08/24-08/25/04	4238541
			Dilution Factor: 1				
Hexavalent Chromium			Work Order #: GN28A1AC LCS Lot-Sample#: A4H250000-543				
	644	654	mg/kg	102	SW846 7196A	08/26/04	4238543
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: GNX711AC LCS Lot-Sample#: D4H260000-149				
	120	120	g/kg	97	SW846 9060	08/23-08/25/04	4239149
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: GNX701AC LCS Lot-Sample#: D4H260000-156				
	120	120	g/kg	101	SW846 9060	08/23-08/25/04	4239156
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A4H140178 Matrix.....: SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium		Work Order #: GNXKH1AC	LCS Lot-Sample#: A4H250000-541		
	79	(10 - 200)	SW846 7196A	08/24-08/25/04	4238541
		Dilution Factor: 1			
Hexavalent Chromium		Work Order #: GN28A1AC	LCS Lot-Sample#: A4H250000-543		
	102	(10 - 200)	SW846 7196A	08/26/04	4238543
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: GNX711AC	LCS Lot-Sample#: D4H260000-149		
	97	(90 - 110)	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: GNX701AC	LCS Lot-Sample#: D4H260000-156		
	101	(90 - 110)	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A4H140178 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon			WO#: GM6161A6-MS/GM6161A7-MSD				MS Lot-Sample #: A4H140178-018		
	2	150	160	g/kg	102		SW846 9060	08/23-08/25/04	4239149
	2	150	150	g/kg	101	1.2	SW846 9060	08/23-08/25/04	4239149
			Dilution Factor: 1						
Total Organic Carbon			WO#: GM63N1A6-MS/GM63N1A7-MSD				MS Lot-Sample #: A4H140178-034		
	10	170	190	g/kg	107		SW846 9060	08/23-08/25/04	4239156
	10	170	190	g/kg	104	2.1	SW846 9060	08/23-08/25/04	4239156
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A4H140178 Matrix.....: SO
Date Sampled...: 08/13/04 Date Received..: 08/14/04

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		WO#:	GM6161A6-MS/GM6161A7-MSD			MS Lot-Sample #: A4H140178-018	
	102	(85 - 117)			SW846 9060	08/23-08/25/04	4239149
	101	(85 - 117)	1.2	(0-10)	SW846 9060	08/23-08/25/04	4239149
		Dilution Factor: 1					
Total Organic Carbon		WO#:	GM63N1A6-MS/GM63N1A7-MSD			MS Lot-Sample #: A4H140178-034	
	107	(85 - 117)			SW846 9060	08/23-08/25/04	4239156
	104	(85 - 117)	2.1	(0-10)	SW846 9060	08/23-08/25/04	4239156
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4H140178 Work Order #...: GM6QR-SMP GM6QR-DUP Matrix.....: SOLID

Date Sampled...: 08/12/04 13:31 Date Received..: 08/14/04

% Moisture.....: 5.8

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
						SD Lot-Sample #: A4H140159-021		
Percent Solids	94.2	92.6	%	1.7	(0-20)	MCAWW 160.3 MOD	08/17-08/18/04	4230366

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4H140178 Work Order #...: GM61P-SMP GM61P-DUP Matrix.....: SO

Date Sampled...: 08/11/04 Date Received..: 08/14/04

% Moisture.....: 20

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4H140178-013		
	80.1	79.7	%	0.40	(0-20)	MCAWW 160.3 MOD	08/17-08/18/04	4230366

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4H140178 Work Order #...: GM616-SMP GM616-DUP Matrix.....: SO

Date Sampled...: 08/12/04 Date Received..: 08/14/04

% Moisture.....: 20

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
						SD Lot-Sample #:	A4H140178-018	
Percent Solids	80.2	80.9	%	0.86	(0-20)	MCAWW 160.3 MOD	08/17-08/18/04	4230368

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4H140178 Work Order #...: GM63N-SMP GM63N-DUP Matrix.....: SO

Date Sampled...: 08/13/04 Date Received..: 08/14/04

% Moisture.....: 30

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4H140178-034		
	70.3	77.3	%	9.5	(0-20)	MCAWW 160.3 MOD	08/17-08/18/04	4230368

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4H140178 Work Order #...: GM75F-SMP GM75F-DUP Matrix.....: SOLID

Date Sampled...: 08/15/04 10:20 Date Received..: 08/16/04

% Moisture.....: 5.6

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4H160138-004		
	94.4	94.8	%	0.43	(0-20)	MCAWW 160.3 MOD	08/17-08/18/04	4230490

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A4H140178 Work Order #...: GNCKV-SMP GNCKV-DUP Matrix.....: SOLID

Date Sampled...: 08/16/04 10:00 Date Received..: 08/17/04

% Moisture.....: 14

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #: A4H170350-001		
	85.9	85.5	%	0.48	(0-20)	MCAWW 160.3 MOD	08/17-08/18/04	4230490

Dilution Factor: 1

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive
Waterloo, Ont. N2V 1C2 (519)884-0510

SHIPPED TO (Laboratory Name): STL NORTH CANTON

REFERENCE NUMBER: 4093-20

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Robert Bressan

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: Site Specific Metals and Inorganics			TOC 9060	Y-Nitrate		HEX Chromium				REMARKS
1	AUG 11/04		SS-4093-081104-RB-001	Storm Grab	1	X			X	X		X				
2			RB-002A		2		H		O		L		O			
3			RB-002B W		2	X			X	X		X				
4			RB-003		2	X			X	X		X				
5			RB-004A W		2	X			X	X		X				
6			RB-004B SLG		2	X			X	X		X				
7			RB-005A W		2	X			X	X		X				
8			RB-005B		2		H		O		L		O			
9			RB-006A		2	X			X	X		X				
10			RB-006B W		2	X			X	X		X				
11			RB-007A W		2	X			X	X		X				
12			RB-007B		2		H		O		L		O			
13			RB-008A		2	X			X	X		X				
14			RB-008B W		2	X			X	X		X				
15			RB-009A W		2	X			X	X		X				
16			RB-009B		2	X			X	X		X				
			TOTAL NUMBER OF CONTAINERS		31	HEALTH/CHEMICAL HAZARDS										Ø

RELINQUISHED BY: ① [signature]	DATE: Aug 13/04 TIME: 1:00 pm	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: FED Ex WAY BILL No.

White —Fully Executed Copy
Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM: Robert Bressan; Sarah Ashley Ferguson

RECEIVED FOR LABORATORY BY: [signature] DATE: 8-14-04 TIME: 9:35

[redacted] № 26436

1001 (D) SEPT 28/93(W) REV.0 (F-42)

113

STL North Canton

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive
Waterloo, Ont. N2V 1C2 (519)884-0510

SHIPPED TO (Laboratory Name): STL North Canton

REFERENCE NUMBER: 4093-20

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Robert Bressa

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS: Inorganics Metals Cadmium High Cr	TOC 9060	7.0 Minerals	HSL Chlorides				REMARKS
1	Aug 12/04		SS-4093-081204-RB-010A ~	Sediment	2	X		X	X	X			
2	↓		RB-010B	↓	6	X	X	X	X	X			MS/MSD
3			RB-011A ~		2	X		X	X	X			
4			RB-011B		2	M	O	C		O			
5			RB-012 ~		2	X		X	X	X			
6			RB-013A ~		2	X		X	X	X			
7			RB-013B		2	M	O	C		O			
8			RB-014A ~		2	X		X	X	X			
9			RB-014B		2	X		X	X	X			
10			RB-015A		2	X		X	X	X			
11			RB-015B		2	X		X	X	X			
12	↓		RB-016 ~		2	X		X	X	X			
13	Aug 11/04		SS-4093-081204-RB-017A ~		2	X		X	X	X			
14			RB-017B ~		2	X		X	X	X			
15			RB-018A		2	X		X	X	X			
16			RB-018B		2		M	O	C	O			
17	↓		RB-019	↓	1	X		X	X	X			

TOTAL NUMBER OF CONTAINERS ~~[illegible]~~ 32 HEALTH/CHEMICAL HAZARDS Ø

RELINQUISHED BY: ① [signature]	DATE: Aug 13/04 TIME: 2:00	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: FEDEX WAY BILL No.

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Goldenrod —Sampler Copy

SAMPLE TEAM: Rob Bressa; Sand Ackl Fergyo

RECEIVED FOR LABORATORY BY: D Gary McBurnon DATE: 8-14-04 TIME: 9:30

[redacted] № 26437

1001 (D) SEPT 28/93(W) REV.0 (F-42)

STL North Canton

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive
Waterloo, Ont. N2V 1C2 (519)884-0510

SHIPPED TO (Laboratory Name): STL- North Canton

REFERENCE NUMBER: 4093-20

SAMPLER'S SIGNATURE: [signature] PRINTED NAME: Robert Brosse

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	Metals			TOC	% moisture		HCl chem				REMARKS
17	Aug 11/04		SS-4093-081304-RB-020	Schut	3	X			X	X		X				MS/MSD
19	↓		RB-021A		1	X			X	X		X				
19			RB-021B		1	X			X	X		X				
21			RB-022A		1	X			X	X		X				
21			RB-022B		1	X			X	X		X				
21			RB-022C		1	X			X	X		X				
24			RB-023		1	X			X	X		X				
25			RB-024A		1	X			X	X		X				
26	↓		RB-024B		1	X			X		X					
29	Aug 11/04		WS-4093-081304-RB-030	Wood	1	X			X			X				
28	↓		RB-031	↓	1	X			X			X				
27	↓		RB-032	↓	1	X			X			X				

TOTAL NUMBER OF CONTAINERS 17 HEALTH/CHEMICAL HAZARDS Ø

RELINQUISHED BY: ① [signature]	DATE: Aug 18/04 TIME: 1200	RECEIVED BY: ②	DATE: TIME:
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: FED EX WAY BILL No.

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Yellow —Receiving Laboratory Copy
Pink —Shipper Copy
Goldenrod —Sampler Copy

SAMPLE TEAM: Rob Brosse
Sarah Ashed Figueroa

RECEIVED FOR LABORATORY BY: [signature]
DATE: 8/14/04 TIME: 9:30

[redacted] № 26438

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STL North Canton

STL Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: A4H140178

Client: CRA
Project:
Quote#: 3[illegible]
Cooler Received on: 8-14-04
Opened on: 8-14-04
by: Natalie [illegible] (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☐ Other:
STL Cooler No# See back Foam Box ☐ Client Cooler ☑ Other
1. Were custody seals on the outside of the cooler? Yes ☑ No ☐ Intact? Yes ☑ No ☐ NA ☐
   If YES, Quantity 2 on each
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Relinquished by client? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other: air Bags
6. Cooler temperature upon receipt _____ °C (see back of form for multiple coolers/temp)
METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☑ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☑
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐
Contacted PM ALM Date: 8-14-04 by: NGB via Voice Mail ☒ Verbal ☐ Other ☐
Concerning: #1

√	
	1. CHAIN OF CUSTODY
	The following discrepancies occurred: - COC did not list % moisture for 030, 031, 032 (wood); will log for total solid - labels do not consistently list "W" or "silt" as part of ID but COC did for some samples; logged ID per COC.
	2. SAMPLE CONDITION
	Sample(s) _____ were received after the recommended holding time had expired.
	Sample(s) _____ were received in a broken container.
	3. SAMPLE PRESERVATION
	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #052804-HNO3; Sulfuric Acid Lot # 011-504-H2SO4; Sodium Hydroxide Lot # -031804-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
	4. Other (see below or back)

Client ID	pH	Date	Initials

1

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant
Client-Small blue	3.7	IR	wet ice
3&4	1.9	IR	wet ice
5&7	2.0	LR	H2O

Discrepancies Cont.

SEVERN TRENT STL

END OF REPORT

Analytical Results (TCLP)

TABLE 1

SAMPLE KEY - WASTE CHARACTERIZATION
CANNELTON SITE
SAULT STE. MARIE, MICHIGAN

			Analyses				
Sample Location		*Sample Identification*	*TCLP Metals*	*Metals*	*TOC*	*% Solids*	*Comments*
Sediment Samples							
BH9	Tannery Bay	SS-4093-050608-SM-001	X		X	X	
BH16	Tannery Bay	SS-4093-050608-SM-002	X		X	X	
BH15	Tannery Bay	SS-4093-050608-SM-003	X		X	X	
BH19	Tannery Bay	SS-4093-050608-SM-004	X		X	X	
SS-31-95	Wetland	SS-4093-050608-SM-005	X		X	X	
SS-52-95	Wetland	SS-4093-050608-SM-006	X		X	X	
Wood Samples							
BH16	Tannery Bay	WS-4093-050608-SM-007	X	X		X	
BH8	Tannery Bay	WS-4093-050608-SM-008	X	X		X	
BH22	Tannery Bay	WS-4093-050608-SM-009	X	X		X	
BH15	Tannery Bay	WS-4093-050608-SM-010	X	X		X	
BH20	Tannery Bay	WS-4093-050608-SM-011	X	X		X	

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Analytical Method Summary 8
Sample Summary 9
Analytical Results by Sample 10
Quality Control Section 22
Chain of Custody 36
Cooler Receipt Form 37

Total # of Pages in this Document **39**

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SEVERN TRENT STL

STL North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Tel: 330 497 9396 Fax: 330 497 0772
www.stl-inc.com

ANALYTICAL REPORT

PROJECT NO. 4093

Cannelton

Lot #: A5F090238

Paul Wiseman (PM)

Conestoga Rovers & Assoc., Inc
14496 Sheldon Rd Suite 200
Plymouth, MI 48170

SEVERN TRENT LABORATORIES, INC.

Denise D Heckler/kmb
Denise D. Heckler
Project Manager

June 22, 2005

CASE NARRATIVE

A5F090238

The following report contains the analytical results for six solid samples submitted to STL North Canton by Conestoga-Rovers & Associates, Inc. from the Cannelton Site, project number 4093. The samples were received June 09, 2005, according to documented sample acceptance procedures.

STL utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. A summary of QC data for these analyses is included at the back of the report.

STL North Canton attests to the validity of the laboratory data generated by STL facilities reported herein. All analyses performed by STL facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. STL's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by a dry weight adjustment footnote at the bottom of the analytical report page. The list of parameters which are never reported on a dry weight basis is included on the Sample Summary.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

If you have any questions, please call the Project Manager, Denise D. Heckler, at 734-205-2535.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT." The total number of pages in this report is 39.

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperature of the cooler upon sample receipt was 4.7°C.

CASE NARRATIVE (continued)

METALS

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive of mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

GENERAL CHEMISTRY

The sample(s) that contain results between the MDL and the RL were flagged with "B". There is the possibility of false positive of mis-identification at these quantitation levels. The acceptance criteria for the ICB, CCB, and Method Blank are +/- the standard reporting limit (SRL).

The sample(s) that contained concentrations of target analyte(s) at a reportable level in the associated Method Blank(s) were flagged with "J". Refer to the sample report pages for the affected analytes(s).

QUALITY CONTROL ELEMENTS OF SW-846 METHODS

STL North Canton conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. STL North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples. These QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. The only exception is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed below.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals
Methylene chloride	Phthalate Esters	Copper
Acetone		Iron
2-Butanone		Zinc
		Lead*

- *for analyses run on TJA Trace ICP, ICPMS or GFAA only*

QUALITY CONTROL ELEMENTS OF SW-846 METHODS
(Continued)

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable. The acceptance criteria do not apply to samples that are diluted for organics if the native sample amount is 4x the concentration of the spike.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepped and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepped and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide, PCB, and PAH methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria.

STL North Canton Certifications and Approvals:

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225), Illinois (#200004), Kansas (#E10336), Massachusetts (#M-OH048), Maryland (#272), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), North Carolina (#39702), Ohio (#6090), OhioVAP (#CL0024), Rhode Island (#237), South Carolina (#92007001, #92007002, #92007003), Tennessee (#02903), Utah (#QUAN9), Virginia (#00011), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit, ACIL Seal of Excellence – Participating Lab Status Award (#82)

Y:\Barb\STL headers\Qc846-Narrative_060204.doc, Revised06/02/04 DJL

EXECUTIVE SUMMARY - Detection Highlights

A5F090238

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-050608-SM-001 06/08/05 001				
Arsenic - TCLP	0.019 B	0.50	mg/L	SW846 6010B
Cadmium - TCLP	0.0073 B	0.10	mg/L	SW846 6010B
Chromium - TCLP	0.53	0.50	mg/L	SW846 6010B
Lead - TCLP	0.031 B	0.50	mg/L	SW846 6010B
Total Organic Carbon	26 J	13	mg/kg	SW846 9060
Percent Solids	75.6	10.0	%	MCAWW 160.3 MOD
SS-4093-050608-SM-002 06/08/05 002				
Arsenic - TCLP	0.019 B	0.50	mg/L	SW846 6010B
Cadmium - TCLP	0.0067 B	0.10	mg/L	SW846 6010B
Chromium - TCLP	0.72	0.50	mg/L	SW846 6010B
Lead - TCLP	0.027 B	0.50	mg/L	SW846 6010B
Total Organic Carbon	19 J	15	mg/kg	SW846 9060
Percent Solids	68.8	10.0	%	MCAWW 160.3 MOD
SS-4093-050608-SM-003 06/08/05 003				
Arsenic - TCLP	0.0055 B	0.50	mg/L	SW846 6010B
Cadmium - TCLP	0.0026 B	0.10	mg/L	SW846 6010B
Chromium - TCLP	0.17 B	0.50	mg/L	SW846 6010B
Lead - TCLP	0.0087 B	0.50	mg/L	SW846 6010B
Total Organic Carbon	68 J	22	mg/kg	SW846 9060
Percent Solids	46.5	10.0	%	MCAWW 160.3 MOD
SS-4093-050608-SM-004 06/08/05 004				
Arsenic - TCLP	0.010 B	0.50	mg/L	SW846 6010B
Cadmium - TCLP	0.022 B	0.10	mg/L	SW846 6010B
Chromium - TCLP	0.96	0.50	mg/L	SW846 6010B
Lead - TCLP	0.019 B	0.50	mg/L	SW846 6010B
Total Organic Carbon	99 J	45	mg/kg	SW846 9060
Percent Solids	22.3	10.0	%	MCAWW 160.3 MOD
SS-4093-050608-SM-005 06/08/05 005				
Mercury - TCLP	0.000046	0.0020	mg/L	SW846 7470A
	Qualifiers: B			
Cadmium - TCLP	0.042 B	0.10	mg/L	SW846 6010B
Chromium - TCLP	0.52	0.50	mg/L	SW846 6010B
Lead - TCLP	0.22 B	0.50	mg/L	SW846 6010B
Total Organic Carbon	94 J	41	mg/kg	SW846 9060
Percent Solids	24.2	10.0	%	MCAWW 160.3 MOD

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

A5F090238

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
SS-4093-050608-SM-006 06/08/05 006				
Arsenic - TCLP	0.014 B	0.50	mg/L	SW846 6010B
Cadmium - TCLP	0.00033 B	0.10	mg/L	SW846 6010B
Chromium - TCLP	0.073 B	0.50	mg/L	SW846 6010B
Lead - TCLP	0.011 B	0.50	mg/L	SW846 6010B
Total Organic Carbon	280 J	48	mg/kg	SW846 9060
Percent Solids	20.7	10.0	%	MCAWW 160.3 MOD

ANALYTICAL METHODS SUMMARY

A5F090238

PARAMETER	ANALYTICAL METHOD
Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Total Organic Carbon	SW846 9060
Total Residue as Percent Solids	MCAWW 160.3 MOD

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

A5F090238

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
HC9QX	001	SS-4093-050608-SM-001	06/08/05	
HC9RG	002	SS-4093-050608-SM-002	06/08/05	
HC9RH	003	SS-4093-050608-SM-003	06/08/05	
HC9RK	004	SS-4093-050608-SM-004	06/08/05	
HC9RM	005	SS-4093-050608-SM-005	06/08/05	
HC9RP	006	SS-4093-050608-SM-006	06/08/05	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-001

TCLP Metals

Lot-Sample #...: A5F090238-001 Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
Leach Date.....: 06/15/05 Leach Batch #..: P516606

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5167022						
Arsenic	0.019 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9QX1AF
		Dilution Factor: 1		MDL.....: 0.0026		
Cadmium	0.0073 B	0.10	mg/L	SW846 6010B	06/16-06/17/05	HC9QX1AG
		Dilution Factor: 1		MDL.....: 0.00028		
Chromium	0.53	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9QX1AH
		Dilution Factor: 1		MDL.....: 0.0019		
Mercury	ND	0.0020	mg/L	SW846 7470A	06/16-06/17/05	HC9QX1AE
		Dilution Factor: 1		MDL.....: 0.000029		
Lead	0.031 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9QX1AJ
		Dilution Factor: 1		MDL.....: 0.0017		

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

B Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-002

TCLP Metals

Lot-Sample #...: A5F090238-002 Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
Leach Date.....: 06/15/05 Leach Batch #..: P516606

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5167022						
Arsenic	0.019 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RG1AF
		Dilution Factor: 1		MDL.....: 0.0026		
Cadmium	0.0067 B	0.10	mg/L	SW846 6010B	06/16-06/17/05	HC9RG1AG
		Dilution Factor: 1		MDL.....: 0.00028		
Chromium	0.72	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RG1AH
		Dilution Factor: 1		MDL.....: 0.0019		
Mercury	ND	0.0020	mg/L	SW846 7470A	06/16-06/17/05	HC9RG1AE
		Dilution Factor: 1		MDL.....: 0.000029		
Lead	0.027 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RG1AJ
		Dilution Factor: 1		MDL.....: 0.0017		

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

B Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-003

TCLP Metals

Lot-Sample #...: A5F090238-003 Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
Leach Date.....: 06/15/05 Leach Batch #..: P516606

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5167022						
Arsenic	0.0055 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RH1AF
		Dilution Factor: 1		MDL.....: 0.0026		
Cadmium	0.0026 B	0.10	mg/L	SW846 6010B	06/16-06/17/05	HC9RH1AG
		Dilution Factor: 1		MDL.....: 0.00028		
Chromium	0.17 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RH1AH
		Dilution Factor: 1		MDL.....: 0.0019		
Mercury	ND	0.0020	mg/L	SW846 7470A	06/16-06/17/05	HC9RH1AE
		Dilution Factor: 1		MDL.....: 0.000029		
Lead	0.0087 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RH1AJ
		Dilution Factor: 1		MDL.....: 0.0017		

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

B Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-004

TCLP Metals

Lot-Sample #...: A5F090238-004 Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
Leach Date.....: 06/15/05 Leach Batch #..: P516606

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5167022						
Arsenic	0.010 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RK1AF
		Dilution Factor: 1		MDL.....: 0.0026		
Cadmium	0.022 B	0.10	mg/L	SW846 6010B	06/16-06/17/05	HC9RK1AG
		Dilution Factor: 1		MDL.....: 0.00028		
Chromium	0.96	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RK1AH
		Dilution Factor: 1		MDL.....: 0.0019		
Mercury	ND	0.0020	mg/L	SW846 7470A	06/16-06/17/05	HC9RK1AE
		Dilution Factor: 1		MDL.....: 0.000029		
Lead	0.019 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RK1AJ
		Dilution Factor: 1		MDL.....: 0.0017		

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

B Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-005

TCLP Metals

Lot-Sample #...: A5F090238-005 Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
Leach Date.....: 06/15/05 Leach Batch #..: P516606

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5167022						
Arsenic	ND	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RM1AF
		Dilution Factor: 1		MDL.....: 0.0026		
Cadmium	0.042 B	0.10	mg/L	SW846 6010B	06/16-06/17/05	HC9RM1AG
		Dilution Factor: 1		MDL.....: 0.00028		
Chromium	0.52	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RM1AH
		Dilution Factor: 1		MDL.....: 0.0019		
Mercury	0.000046 B	0.0020	mg/L	SW846 7470A	06/16-06/17/05	HC9RM1AE
		Dilution Factor: 1		MDL.....: 0.000029		
Lead	0.22 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RM1AJ
		Dilution Factor: 1		MDL.....: 0.0017		

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

B Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-006

TCLP Metals

Lot-Sample #...: A5F090238-006 Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
Leach Date.....: 06/15/05 Leach Batch #..: P516606

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 5167022						
Arsenic	0.014 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RP1AF
		Dilution Factor: 1		MDL.....: 0.0026		
Cadmium	0.00033 B	0.10	mg/L	SW846 6010B	06/16-06/17/05	HC9RP1AG
		Dilution Factor: 1		MDL.....: 0.00028		
Chromium	0.073 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RP1AH
		Dilution Factor: 1		MDL.....: 0.0019		
Mercury	ND	0.0020	mg/L	SW846 7470A	06/16-06/17/05	HC9RP1AE
		Dilution Factor: 1		MDL.....: 0.000029		
Lead	0.011 B	0.50	mg/L	SW846 6010B	06/16-06/17/05	HC9RP1AJ
		Dilution Factor: 1		MDL.....: 0.0017		

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

B Estimated result. Result is less than RL.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-001

General Chemistry

Lot-Sample #...: A5F090238-001 Work Order #...: HC9QX Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
% Moisture.....: 24

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	75.6	10.0	%	MCAWW 160.3 MOD	06/10-06/13/05	5161503
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	26 J	13	mg/kg	SW846 9060	06/13/05	5165052
		Dilution Factor: 1		MDL.....: 1		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-002

General Chemistry

Lot-Sample #...: A5F090238-002 Work Order #...: HC9RG Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
% Moisture.....: 31

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	68.8	10.0	%	MCAWW 160.3 MOD	06/10-06/13/05	5161503
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	19 J	15	mg/kg	SW846 9060	06/13/05	5165052
		Dilution Factor: 1		MDL.....: 1		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-003

General Chemistry

Lot-Sample #...: A5F090238-003 Work Order #...: HC9RH Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
% Moisture.....: 54

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	46.5	10.0	%	MCAWW 160.3 MOD	06/10-06/13/05	5161503
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	68 J	22	mg/kg	SW846 9060	06/13/05	5165052
		Dilution Factor: 1		MDL.....: 2		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-004

General Chemistry

Lot-Sample #...: A5F090238-004 Work Order #...: HC9RK Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
% Moisture.....: 78

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	22.3	10.0	%	MCAWW 160.3 MOD	06/10-06/13/05	5161503
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	99 J	45	mg/kg	SW846 9060	06/13/05	5165052
		Dilution Factor: 1		MDL.....: 4		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-005

General Chemistry

Lot-Sample #...: A5F090238-005 Work Order #...: HC9RM Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
% Moisture.....: 76

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	24.2	10.0	%	MCAWW 160.3 MOD	06/10-06/13/05	5161503
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	94 J	41	mg/kg	SW846 9060	06/13/05	5165052
		Dilution Factor: 1		MDL.....: 3		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Conestoga-Rovers & Associates, Inc.

Client Sample ID: SS-4093-050608-SM-006

General Chemistry

Lot-Sample #...: A5F090238-006 Work Order #...: HC9RP Matrix.....: SO
Date Sampled...: 06/08/05 Date Received..: 06/09/05
% Moisture.....: 79

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids	20.7	10.0	%	MCAWW 160.3 MOD	06/10-06/13/05	5161503
		Dilution Factor: 1		MDL.....: 10.0		
Total Organic Carbon	280 J	48	mg/kg	SW846 9060	06/13/05	5165052
		Dilution Factor: 1		MDL.....: 4		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

SEVERN TRENT STL

QUALITY CONTROL SECTION

METHOD BLANK REPORT

TCLP Metals

Client Lot #...: A5F090238 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A5F150000-379		**Prep Batch #...:** 5167022				
Leach Date.....: 06/15/05		**Leach Batch #..:** P516606				
Arsenic	ND	0.50	mg/L	SW846 6010B	06/16-06/17/05	HDM9T1AC
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	06/16-06/17/05	HDM9T1AE
		Dilution Factor: 1				
Chromium	**0.0025 B**	**0.50**	**mg/L**	**SW846 6010B**	**06/16-06/17/05**	**HDM9T1AF**
		Dilution Factor: 1				
Lead	**0.022 B**	**0.50**	**mg/L**	**SW846 6010B**	**06/16-06/17/05**	**HDM9T1AG**
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	06/16-06/17/05	HDM9T1AK
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

TCLP Metals

Client Lot #...: A5F090238 **Matrix.....:** SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: A5F160000-022 **Prep Batch #...:** 5167022						
Arsenic	ND	0.50	mg/L	SW846 6010B	06/16-06/17/05	HDPG71AA
		Dilution Factor: 1				
Cadmium	ND	0.10	mg/L	SW846 6010B	06/16-06/17/05	HDPG71AD
		Dilution Factor: 1				
Chromium	ND	0.50	mg/L	SW846 6010B	06/16-06/17/05	HDPG71AE
		Dilution Factor: 1				
Lead	ND	0.50	mg/L	SW846 6010B	06/16-06/17/05	HDPG71AF
		Dilution Factor: 1				
Mercury	ND	0.0020	mg/L	SW846 7470A	06/16-06/17/05	HDPG71AJ
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TCLP Metals

Client Lot #...: A5F090238 **Matrix.....:** SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A5F160000-022 **Prep Batch #...:** 5167022							
Arsenic	2.0	2.0	mg/L	98	SW846 6010B	06/16-06/17/05	HDPG71AK
			Dilution Factor: 1				
Cadmium	0.050	0.052	mg/L	104	SW846 6010B	06/16-06/17/05	HDPG71AM
			Dilution Factor: 1				
Chromium	0.20	0.20	mg/L	99	SW846 6010B	06/16-06/17/05	HDPG71AN
			Dilution Factor: 1				
Lead	0.50	0.51	mg/L	103	SW846 6010B	06/16-06/17/05	HDPG71AP
			Dilution Factor: 1				
Mercury	0.0050	0.0050	mg/L	100	SW846 7470A	06/16-06/17/05	HDPG71AT
			Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: A5F090238 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: A5F160000-022 **Prep Batch #...:** 5167022					
Arsenic	98	(50 - 150)	SW846 6010B	06/16-06/17/05	HDPG71AK
		Dilution Factor: 1			
Cadmium	104	(50 - 150)	SW846 6010B	06/16-06/17/05	HDPG71AM
		Dilution Factor: 1			
Chromium	99	(50 - 150)	SW846 6010B	06/16-06/17/05	HDPG71AN
		Dilution Factor: 1			
Lead	103	(50 - 150)	SW846 6010B	06/16-06/17/05	HDPG71AP
		Dilution Factor: 1			
Mercury	100	(50 - 150)	SW846 7470A	06/16-06/17/05	HDPG71AT
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TCLP Metals

Client Lot #...: A5F090238 **Matrix.....:** SOLID
Date Sampled...: 06/10/05 14:00 **Date Received..:** 06/11/05

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A5F140261-017 **Prep Batch #...:** 5167022									
Leach Date.....: 06/15/05 **Leach Batch #..:** P516606									
Arsenic									
	ND	50.0	51.0	mg/L	102		SW846 6010B	06/16-06/17/05	HDKR81AP
	ND	50.0	52.0	mg/L	104	2.1	SW846 6010B	06/16-06/17/05	HDKR81AQ
			Dilution Factor: 50						
Cadmium									
	0.0033	10.0	10.5	mg/L	105		SW846 6010B	06/16-06/17/05	HDKR81AU
	0.0033	10.0	10.8	mg/L	108	2.7	SW846 6010B	06/16-06/17/05	HDKR81AV
			Dilution Factor: 50						
Chromium									
	0.023	50.0	50.6	mg/L	101		SW846 6010B	06/16-06/17/05	HDKR81AW
	0.023	50.0	51.7	mg/L	103	2.1	SW846 6010B	06/16-06/17/05	HDKR81AX
			Dilution Factor: 50						
Lead									
	0.035	50.0	52.6	mg/L	105		SW846 6010B	06/16-06/17/05	HDKR81A0
	0.035	50.0	53.8	mg/L	108	2.4	SW846 6010B	06/16-06/17/05	HDKR81A1
			Dilution Factor: 50						
Mercury									
	ND	0.050	0.049	mg/L	98		SW846 7470A	06/16-06/17/05	HDKR81A6
	ND	0.050	0.048	mg/L	96	2.7	SW846 7470A	06/16-06/17/05	HDKR81A7
			Dilution Factor: 10						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TCLP Metals

Client Lot #...: A5F090238 **Matrix.....:** SOLID
Date Sampled...: 06/10/05 14:00 **Date Received..:** 06/11/05

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: A5F140261-017 **Prep Batch #...:** 5167022							
Leach Date.....: 06/15/05 **Leach Batch #..:** P516606							
Arsenic	102	(50 - 150)			SW846 6010B	06/16-06/17/05	HDKR81AP
	104	(50 - 150)	2.1	(0-20)	SW846 6010B	06/16-06/17/05	HDKR81AQ
		Dilution Factor: 50					
Cadmium	105	(50 - 150)			SW846 6010B	06/16-06/17/05	HDKR81AU
	108	(50 - 150)	2.7	(0-20)	SW846 6010B	06/16-06/17/05	HDKR81AV
		Dilution Factor: 50					
Chromium	101	(50 - 150)			SW846 6010B	06/16-06/17/05	HDKR81AW
	103	(50 - 150)	2.1	(0-20)	SW846 6010B	06/16-06/17/05	HDKR81AX
		Dilution Factor: 50					
Lead	105	(50 - 150)			SW846 6010B	06/16-06/17/05	HDKR81A0
	108	(50 - 150)	2.4	(0-20)	SW846 6010B	06/16-06/17/05	HDKR81A1
		Dilution Factor: 50					
Mercury	98	(50 - 150)			SW846 7470A	06/16-06/17/05	HDKR81A6
	96	(50 - 150)	2.7	(0-20)	SW846 7470A	06/16-06/17/05	HDKR81A7
		Dilution Factor: 10					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A5F090238 Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids		Work Order #:	HDGT81AA	MB Lot-Sample #:	A5F100000-503	
	ND	10.0	%	MCAWW 160.3 MOD	06/10-06/13/05	5161503
		Dilution Factor: 1				
Total Organic Carbon		Work Order #:	HDH501AA	MB Lot-Sample #:	A5F140000-052	
	4 B	10	mg/kg	SW846 9060	06/13/05	5165052
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A5F090238 Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon			Work Order #:	HDH501AC	LCS Lot-Sample#:	A5F140000-052	
	290	280	mg/kg	97	SW846 9060	06/13/05	5165052

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A5F090238 **Matrix.....:** SOLID

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		Work Order #: HDH501AC		LCS Lot-Sample#: A5F140000-052	
	97	(51 - 128)	SW846 9060	06/13/05	5165052
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A5F090238 **Matrix.....:** SO
Date Sampled...: 06/08/05 **Date Received..:** 06/09/05

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon			WO#: HC9RG1AK-MS/HC9RG1AL-MSD				MS Lot-Sample #: A5F090238-002		
	19	360	380	mg/kg	100		SW846 9060	06/13/05	5165052
	19	360	380	mg/kg	99	0.91	SW846 9060	06/13/05	5165052
			Dilution Factor: 1						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A5F090238 **Matrix.....:** SO
Date Sampled...: 06/08/05 **Date Received..:** 06/09/05

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Organic Carbon		WO#:	HC9RG1AK-MS/HC9RG1AL-MSD			MS Lot-Sample #:	A5F090238-002
	100	(65 - 128)			SW846 9060	06/13/05	5165052
	99	(65 - 128)	0.91	(0-20)	SW846 9060	06/13/05	5165052

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Results and reporting limits have been adjusted for dry weight.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5F090238 **Work Order #...:** HC7FP-SMP HC7FP-DUP **Matrix.....:** SOLID

Date Sampled...: 06/01/05 10:25 **Date Received..:** 06/08/05

% Moisture.....: 19

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #:	A5F080324-004	
	81.3	80.9	%	0.59	(0-20)	MCAWW 160.3 MOD	06/10-06/13/05	5161503

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: A5F090238 **Work Order #...:** HC9RP-SMP HC9RP-DUP **Matrix.....:** SO

Date Sampled...: 06/08/05 **Date Received..:** 06/09/05

% Moisture.....: 79

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Percent Solids						SD Lot-Sample #:	A5F090238-006	
	20.7	26.3	%	24	(0-20)	MCAWW 160.3 MOD	06/10-06/13/05	5161503

Dilution Factor: 1

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
651 Colby Drive
Waterloo, Ont. N2V 1C2 (519)884-0510

SHIPPED TO (Laboratory Name): STL

REFERENCE NUMBER: 4093

SAMPLER'S SIGNATURE: Scott Mathews PRINTED NAME: Scott Mathews

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	TCLP* (METALS)	TOC	TOTAL METALS	% SOLIDS						REMARKS
001	June 08/05		SS-4093-050608-SM-001	SOIL	3	X	X		X						*TCLP METALS:
002			SS-4093-050608-SM-002	SOIL	3	X	X		X						As, Cd, Cr, Pb, Hg
003			SS-4093-050608-SM-003	SEDIMENT	3	X	X		X						
004			SS-4093-050608-SM-004	"	3	X	X		X						
005			SS-4093-050608-SM-005	"	3	X	X		X						
006			SS-4093-050608-SM-006	"	3	X	X		X						
007			WS-4093-050608-SM-007	WOOD		X		X	X						
008			WS-4093-050608-SM-008	"		X		X	X						
009			WS-4093-050608-SM-009	"		X		X	X						
010			WS-4093-050608-SM-010	"		X		X	X						
011			WS-4093-050608-SM-011	"		X		X	X						

TOTAL NUMBER OF CONTAINERS 18 HEALTH/CHEMICAL HAZARDS Ø

RELINQUISHED BY: ① [signature]	DATE: Jun 8/05 TIME: 3:45pm	RECEIVED BY: ② Jesse B Buchanan	DATE: 6/9/05 TIME: 9:45
RELINQUISHED BY: ②	DATE: TIME:	RECEIVED BY: ③	DATE: TIME:
RELINQUISHED BY: ③	DATE: TIME:	RECEIVED BY: ④	DATE: TIME:

METHOD OF SHIPMENT: FEDEX WAY BILL No. 847871068626

White	–Fully Executed Copy
Yellow	–Receiving Laboratory Copy
Pink	–Shipper Copy
Goldenrod	–Sampler Copy

SAMPLE TEAM: Sarah Ackert Ferguson, Scott Mathews

RECEIVED FOR LABORATORY BY: _____ DATE: _____ TIME: _____

№ 30082

1001 (D) SEPT 28/93(W) REV.0 (F-42)

STL North Canton

STL Cooler Receipt Form/Narrative **Lot Number:** 45F090238
North Canton Facility

Client: CRA Project: Quote#:
Cooler Received on: 6/9/05 Opened on: 6/9/05 by: ~~6/9/05~~ SAS
(Signature) Jesse B Buchanan

Fedx ☑ Client Drop Off ☐ UPS ☐ DHL ☐ FAS ☑ Other:
STL Cooler No# 681 Foam Box ☐ Client Cooler ☑ Other

1. Were custody seals on the outside of the cooler? Yes ☑ No ☐ Intact? Yes ☑ No ☐ NA ☐
   If YES, Quantity 2
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Did custody papers accompany the samples? Yes ☑ No ☐ Relinquished by client? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used: Bubble Wrap ☑ Foam ☐ None ☐ Other :
6. Cooler temperature upon receipt 4.7 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_20 Slurry ☐
COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☑

7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Could all bottle labels and/or tags be reconciled with the COC? Yes ☑ No ☐
9. Were samples at the correct pH? (record below/on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☑
12. Sufficient quantity received to perform indicated analyses? Yes ☑ No ☐

Contacted PM _____ Date: _____ by: _____ via Voice Mail ☐ Verbal ☐ Other ☐
Concerning: _____

√		

1. CHAIN OF CUSTODY

The following discrepancies occurred:

2. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.

3. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot # 030905-HNO3; Sulfuric Acid Lot # 102804-H2SO4; Sodium Hydroxide Lot # -100504-NaOH; Hydrochloric Acid Lot # 100504-HCl; Sodium Hydroxide and Zinc Acetate Lot # 071604-CH3COO2ZN/NaOH*
Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)

4. Other (see below or back)

Client ID	pH	Date	Initials

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler	Temp	Method	Coolant

Discrepancies Cont.

SEVERN TRENT STL

END OF REPORT

Ridgeview Recycling and Disposal Facility
A Division of Waste Management of Wisconsin, Inc.
A WMI BioSite[sm]
6207 Hempton Lake Road Whitelaw, WI 54247-0227
920/732-4473 800/444-7919 F: 920/732-3758

WASTE MANAGEMENT

Fax

To:	Steve Bosko, Weston Solutions	**From:**	Marie Jaszewski – ext. 230
Fax:	847/918-4055	**Pages:**	2
Phone:		**Date:**	11/27/06
Re:	DFT MW755947 – Cyprus Mines Corp.	**CC:**	

☐ **Urgent** ☐ **For Approval** ☐ **Please Comment**

Hi Steve,
Following is a copy of the 'Special Waste Management Decision' with the extended expiration date of 12/31/07.

If you have any questions/concerns, please don't hesitate to contact me at 732-4473, ext 230.

Thank-you,
Marie Jaszewski
Technical Service Representative
Northern WI and Upper MI
mjaszewski@wm.com

#1-25

WM WASTE MANAGEMENT

NORTHERN REGION
SPECIAL WASTE MANAGEMENT DECISION

DFT MW 755947
Waste Profile Serial Code

Request For Decision: X Initial ____ Renewal ____ High Volume (F,A,P,N/A)

GENERATOR NAME: Cyprus Mines Corp. ADDRESS: 1000 South St.

CITY/STATE: Sault Ste. Marie, Mich

SITE NAME(S): Sediments from Tonnery Bay

PROPOSED MANAGEMENT FACILITY: Dafter L.F.

PROPOSED INTERMEDIATE TRANSFER FACILITY: N/A TRANSPORTER TBD

WM REQUESTER: Marie Jaszewski SIGNATURE: Marie Jaszewski

TECHNICAL MANAGER DECISION: (circle one) APPROVED DISAPPROVED ____ Check if additional information is attached.

Disapproved, Explain:

Approved, Complete A,B,C D Below:

Management Method(s): LANDFILL (CODISPOSAL)

Provisions, Conditions, or Limitations on Approval: Per the site Special Waste Plan

Waste must not contain free liquids.

Decision Expiration Date: 12/31/06 12/31/07 11/16/06

TECH MGR. SIGNATURE: Richard Pager NAME (Print): Richard L. Pager DATE: 9/9/05

B. MANAGEMENT FACILITY SITE MANAGER DECISION: (circle one) APPROVED DISAPPROVED

Approved, State Any Special Provisions, Conditions, or Limitations:

MGR. SIGNATURE: NAME (Print): DATE: 9/9/05

C. INTERMEDIATE TRANSFER FACILITY SITE MANAGER DECISION: (circle one) APPROVED DISAPPROVED

Approved, State Any Special Provisions, Conditions, or Limitations:

MGR. SIGNATURE: NAME (Print): DATE:

#560

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20443

Date 10-12-06

To MCM MARINE

Address

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
	RAINONE		56,327 LBS	
IN	28,100			
OUT	53,650			
NET	25,550 KGS			
	56,327 LBS			

DRIVER SIGNATURE [signature] TRK 77-77 TRL WF11

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Located in Michigan's Upper Peninsula

Ph: (906) 293-3766
FAX (906) 293-5325

20446

Date 10-13-06

To MCM MARINE

Address

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
DRY				
SAWD	RAINONE			
DUST				
IN	27,890			
OUT	53,100			
NET	25,210 KGS			
		55,577 LBS		
		27.8 TONS		

DRIVER SIGNATURE [signature] TRK 77 TRL 77 WZ8

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Swift Printing

Zellar Trucking, Inc

Zellar
County Rd. 438
Milan, MI 48353-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20448

T	FROM	YARDS	TONS	SLIP #
			26.75 TON	
		7,30		
		52,200		
		70	KGS	
		505	KGS	

TRK 77-77 TRL WFS

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

[illegible] & Trucking, Inc

Ph: (906) 293-3766
FAX (906) 293-5325

20449

City [illegible]

			TONS	SLIP #
			57,843 LBS	

Zo[illegible] Ba[illegible] & Trucking, Inc

[illegible]a Zo[illegible]
[illegible] Rd. 4[illegible]
[illegible] 49853-[illegible]

Ph: (906) 293-3766
FAX (906) 293-5325

19607

[illegible]ed in Michigan's Upper Peninsula

[illegible]-1[illegible]

[illegible]

Ad[illegible] [illegible]

[illegible]	YARDS	TONS	SLIP #
R[illegible]		58,531 ~~[illegible]~~ LBS	
[illegible] 27,700			
[illegible] 54,2[illegible]0			
[illegible] 2[illegible] 2[illegible]50			
	58,531 LBS		

DRIV[illegible] [signature] TRK 77-77 TRL 58

CUST[illegible] [illegible]RE

~ LANDSCA[illegible]ING BARK ~

[illegible] quality, proce[illegible] uniform in [illegible] rich in [illegible]

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

19608

Date 10-16-06

To MCM MARINE

Address PORTAGE

City SSM

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
DRY			32.55	TONS
SAW	RAINONE			
DUST				
	IN	28,740		
	OUT	58,270		
	NET	29,530		
		65,101 LBS		

DRIVER SIGNATURE [signature] TRK 77-77 TRL WF8

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

19627

Date 10/20/06

To MCM MARINE

Address

City

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Dry Sawdust	RAINONES			59422 LBS
IN	27920 KGS	(61424 pds)		
OUT	54930 KGS	(120846 pds)		
NET	27010 KGS	(59422 pds)		

DRIVER SIGNATURE Jason Milbert TRK 22-22 TRL WF-11

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

19621

Date 10-20-06

To NICM MARINE

Address

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
DRY			66,902 LBS	
SAW	RAINONE			
DUST				
IN	29,190			
OUT	59,600			
WET	30,410	K6.5		
		66,902 LBS		

DRIVER SIGNATURE [signature] TRK 77-77 TRL WF-1(

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

19632

Date 10/24/06

To MCM MACINE

Address Portage AVE.

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Dry	RAINBNES		27.038 TONS	
SAW				
DUST				
IN	28110	6842	LBS	
OUT	52690	115918	LBS	
NET	24580	54076	LBS	

DRIVER SIGNATURE Jason Milbert TRK 22-22 TRL WF-8

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

19609

Date ~~[illegible]~~ 10/24/06

To MCM MARINE

Address PORTAGE AVE —

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
DRY				
SAW	RAINONE			
DUST				
IN	28910	63602 LBS		
OUT	57290	126038 LBS		
NET	28380	62436 LBS		

DRIVER SIGNATURE [signature] TRK 77-77 TRL WE-8

CUSTOMER SIGNATURE

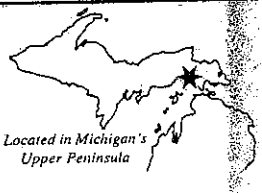
~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719



Ph: (906) 293-3766
FAX (906) 293-5325

18502

Date 10-26-06

To MCM MARINE

Address

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
DRY			55,268 LBS	
SAW	RAINONE			
DUST				
IN	28,630			
OUT	53,700			
WET	25,070			
		~~55,268~~		
		55,268 LBS		

DRIVER SIGNATURE [signature] TRK 77-77 TRL WF 11

CUSTOMER SIGNATURE Craig Power

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

19638

Date 10/26/06

To MCM MARINE

Address Portage ST.

City SSM MICH.

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Dry Sawdust	RAINONES		24.8 TONS	
IN	28170	61974 LBS		
OUT	50720	111584 LBS		
NET	22550	49610 LBS		

DRIVER SIGNATURE Jason Millard TRK 22-22 TRL 605-8

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Located in Michigan's Upper Peninsula

Ph: (906) 293-3766
FAX (906) 293-5325

19640

Date 10/27/06

To M.C.M. MARINE

Address

City

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Dry	RAINONES		35.2 TONS	
SAWDUST				
IN	28250	62150	LBS	
OUT	60250	132550	LBS	
NET	32000	70400	LBS	

DRIVER SIGNATURE Jason Milbert TRK 22-22 TRL WF-8

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

18508

Date 10-30-06

To MCM MARINE

Address 1065 PORTAGE AVE

City SSM MI 49783

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
DRY SAW DUST	RAINONE		46,869 LBS	
IN	28,890			
OUT	50,150			
NET	21,260			
		46,869 LBS		

DRIVER SIGNATURE [signature] TRK 77-77 TRL WFII

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Ste. Marie Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

19646

Date 11/1/06

To MCM MARINE

Address Portage Ave.

City SS M. MICH

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Dry	RAINONES			21670/55
SAWDUST				
IN	28730			
OUT	50400			
NET	21670			

DRIVER SIGNATURE [signature] TRK 22-22 TRL WE-12

CUSTOMER SIGNATURE

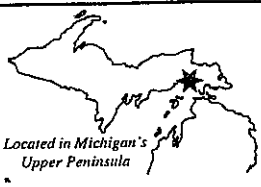
~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719



Ph: (906) 293-3766
FAX (906) 293-5325

18551

Date 11/6/06

To MCM MARINE

Address Portage Ave.

City SS M. MI.

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Sawdust	NBY WOOD			
IN	53490 KGS	(117680 LBS)		
OUT	29500 KGS	(64900 LBS)		
NET	23990 KGS	(52778 LBS)		

DRIVER SIGNATURE Jason Millert TRK 22-22 TRL WF-12

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

18552

Date 11/6/06

To MCM MARINE

Address PORTAGE ST.

City SSM MI.

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Dry	RAINORES			
SAWDUST				
IN	29300 KGS			
OUT	52470 KGS			
NET	23170 KGS			

DRIVER SIGNATURE Jason Mulbert TRK 22-22 TRL WF-12

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

18554

Date 11/8/06

To MCM MARINE

Address

City

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAWDUST	NBY WOOD			
IN	116080 LBS			
OUT	28870 KGS	63514 LBS		
NET	52566 LBS			

DRIVER SIGNATURE Jason Mulbert TRK 2222 TRL WF-12

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

18530

Date 11-14-06

To MCM MARINE

Address PORTAGE AVE

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW			23.1	TONS
DUST	RAINONE			
IN	28,660			
OUT	49650			
NET	20990			
		46,274 LBS		

DRIVER SIGNATURE [signature] TRK 77-77 TRL WFII

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

18528

Date 11-14-06

To MCM MARINE

Address PORTAGE AVE.

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW			28.5	TONS
DUST	NBY WOOD			
IN	60,900			
OUT	118,060			
NET	57,160 LBS			

DRIVER SIGNATURE [signature] TRK 77-77 TRL WF 11

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

LOUISIANA-PACIFIC CORPORATION

NEWBERRY, MICHIGAN
461 Miller Road
Newberry, MI 49868

130
Zellar in

DATE

CUSTOMERS NAME

ADDRESS

COMMODITY WT Aspen

CARRIER Zellar 5023 3 axle

B:37680 6-29-07 GROSS lb 37680 / 47080

ND 6901

2354 TON

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

19393

Date 7-2-07

To MCM MARINE

Address PORTAGE AVE

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW				
DUST	NBY WOOD			
IN	105,740			
	Tare 22680 kg	=	25.00 tons	
	Net	=	27.87 tons	

DRIVER SIGNATURE [signature] TRK 77-77 TRL 7W-01

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Boniferro Mill Works
Sault Ste. Marie, Ont

***** OUTBOUND *****

DATE/TIME IN :7/9/2007 10:38:26 AM
DATE/TIME OUT:7/9/2007 11:32:06 AM

Gross Weight :22330 kg. (Boniferro
Tare Weight :50510 kg. (Boniferro
Net Weight :-28180 kg.

B.O.L. :14589 @ 31.06 tns

Card Number :0000042
Ticket# :28870

Trucker :Zellar Inc
Jobber :Rainone
Commodity :Hogfuel
Land Type Origin :
Approval # :
Township/Block# :
Destination :Rainone Yard

****** PLEASE DRIVE SAFELY ******

Boniferro Mill Works
Sault Ste. Marie, Ont

***** OUTBOUND *****

DATE/TIME IN :7/17/2007 7:44:25 AM
DATE/TIME OUT:7/17/2007 8:24:52 AM

Gross Weight :22690 kg. (Boniferro
Tare Weight :42510 kg. (Boniferro
Net Weight :-19820 kg.

B.O.L. :20594

Card Number :[illegible]
Ticket# :28[illegible]

Trucker :Zellar Inc
Jobber :Raimone
Commodity :Hogfuel
Land Type Origin :
Approval # :
Township/Block# :
Destination :Raimone Yard

***** PLEASE DRIVE SAFELY *****

Copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Located in Michigan's Upper Peninsula

Ph: (906) 293-3766
FAX (906) 293-5325

20596

Date 7/17/07

To MCM Marine Inc

Address 1065 E. Portage Ave P.O.B. 922

City Sault Ste Marie Mi 49783

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Sawdust	Zellar	T/L		
In	42510 kg			
Out	22690 kg			
Net	19820 =	21.95 tons		

DRIVER SIGNATURE Dan Gibb TRK Loco TRL Sw Bro

CUSTOMER SIGNATURE D. McCoy

- LANDSCAPING BARK -

Boniferro Mill Works
Sault Ste. Marie, Ont

***** OUTBOUND *****

DATE/TIME IN :7/18/2007 4:40:33 PM
DATE/TIME OUT:7/18/2007 5:18:01 PM

Gross Weight :22730 kg. (Boniferro
Tare Weight :42150 kg. (Boniferro
Net Weight :-19420 kg.

B.O.L. :20591

Card Number :0000042
Ticket# :28895

Tracker
Jobber :Zellar Inc
Commodity :Rainone
Land Type Origin :Hogfuel
Approval # :
Township/Block# :
Destination :Rainone Yard

****** PLEASE DRIVE SAFELY ******

Copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-9766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20593

Date 7/17/07

To MCM MARINE Inc

Address 1065 E. Portage Ave P.O. Box 922

City Sault Ste Marie Mi

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Sawdust	Zellar	T/L		
			Paid	
In	42150	kg		
Out	22730	kg		
Net	19420	kg		
				=17.64 tons
				1600.00

DRIVER SIGNATURE Dan Elenbaas TRK 10-10 TRL

CUSTOMER SIGNATURE

Copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located In Michigan's Upper Peninsula

20705

Date 7-19-07

To MCM MARINE

Address PORTAGE AVE

City SSM MI

Terms

paid 8/14/07 36000

PRODUCT	FROM	YARDS	TONS	SLIP #
Slaw				
Dust	NBY/Wood			
Tan	113880			
out	51,800			
	62,000			
net	231 tons			

JOB # 126
Acct 106455

DRIVER SIGNATURE _____ TRK 77-72 TRL w Tol

CUSTOMER SIGNATURE Ryan Palmer

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

1,300.00

Zellar Bark & Trucking, Inc

Copy

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Located in Michigan's Upper Peninsula

Ph: (906) 293-3766
FAX (906) 293-5325

20723

7-30-07

ICM MARINE

55M dr.

DUCT	FROM	YARDS	TONS	SLIP #
ST	NB/Lumber		107 700 Gross	
		Tare	52 000 lbs	
		Net	55,700 lbs	
			= 27.85 tons	

DRIVER SIGNATURE [signature] TRK 77-77 TRL WFOL

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Zellar Bark & Trucking, Inc

na Zellar
ity Rd. 438
ll 49853-9719

Located in Michigan's Upper Peninsula

Ph: (906) 293-3766
FAX (906) 293-5325

20734

Copy

8-6-07

NCM MARINE
PORTAGE AVE
SSM. MI

ODUCT	FROM	YARDS	TONS	SLIP #
AW		GROSS	105,880	
LST	NBY WOOD	TARE	52,000	
		NET	53,880 LBS	
			= 26.94 tons	

TRK 77-77 TRL WOOD

DRIVER SIGNATURE

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Located in Michigan's Upper Peninsula

Ph: (906) 293-3766
FAX (906) 293-5325

20741

Date 8-9-07

To MCM MARINE

Address PORTAGE AVE

City SSM ~~[illegible]~~ M.

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW				
DUST	NBY/WOOD	GROSS	111,980	
		TARE	53200	
		NET	58,780 LBS	
			=	29.39 tons

DRIVER SIGNATURE [illegible] TRK 77-7 PRINTED

CUSTOMER SIGNATURE [illegible]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Zellar Bark & Trucking, Inc

dna Zellar
nty Rd. 438
MI 49853-9719

Located in Michigan's Upper Peninsula

Ph: (906) 293-3766
FAX (906) 293-5325

20742

COPY

8-9-07

CM MARINE
ORTAGE AVE
SM M.

OT	FROM	YARDS	TONS	SLIP #
T	NORWOOD	GROSS 114,760		
		TARE 52,900		
		NET 61,860 LBS		
		=		30.93 tons

DRIVER SIGNATURE _____ TRK 77-77 TRUCKED

CUSTOMER SIGNATURE _____

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Shop Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

20747

Date 8-10-07

To MCM MARINE

ress PORTAGE AVE

y SSM ONT.

erms

PRODUCT	FROM	YARDS	TONS	SLIP #
		IN	22,310	
SAW		OUT	41,200	
DUST	RAINONE	NET	18,890 kgs	

DRIVER SIGNATURE [signature] TRK 77-77 TRL WT-01

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20747

Date 8-10-07

To MCM MARINE

Address PORTAGE AVE

City SSM ONT.

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
		IN	22,310	
SAW		OUT	41,200	
DUST	RAINONE	NET	18,890 KGS	
			=20.83 tns	

DRIVER SIGNATURE [signature] TRK 77-77 TRL W-01

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Built on Printing

copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20748

Date 8-13-07

To MCM MARINE

Address PORTAGE AVE

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW DUST	NBY/LUMBER		1TL	
		IN	111,220	
		OUT	52,500	
		NET	58,720	
			=29,36 TONS	

TRK 77 TRL 7

DRIVER SIGNATURE

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Zellar Bark & Trucking, Inc

Copy

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20854

Date 8-15-07

To MCM MARINE

Address PORTAGE AVE

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW				
DUST	NBY LUMBER			
		IN	111,960	
		OUT	52,500	
		NET	59,460	
			= 29.73	tons

DRIVER SIGNATURE [signature] TRK 77-77 TRL W-01

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Stout Printing

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20858

Date 8-16-07

To MCM MARINE

Address PORTAGE AVE

City SSM ~~[illegible]~~ MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW		IN	111,960	
DUST	NBY LUMBER	OUT	51,280	
		NET	60,680	
				30,340 LBS
IN				
OUT				
NET				

DRIVER SIGNATURE [signature] TRK 77-77 TRL WTD

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20863

Date 8-17-07

To MCM MARINE

Address PORTAGE AVE

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW			110.66	
DUST	Moy Lumber	IN	52.30	
		OUT		
		NET	26.15 tons	

DRIVER SIGNATURE TRK 77-77 TRL WED

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20865

Date 8-17-07

MCM MARINE
PORTAGE AVE
SSM MI

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW			19,350	KGS
DUST	RAINONES			
IN	22,230			
OUT	42,580			
NET	19,350 =		21.33 tons	

DRIVER SIGNATURE _____ TRK 77-77 TRL WED

CUSTOMER SIGNATURE _____

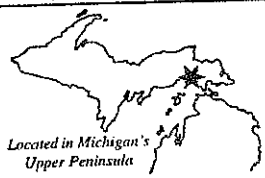
LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719



Ph: (906) 293-3766
FAX (906) 293-5325

20870

Date 8-20-07

To MCM MARINE

Address

City SSM MI.

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
Snow				
Dust	Rainone			
IN	22110			
OUT	40,840			
NET	18730	x6.5	=20.65	tons

DRIVER SIGNATURE [signature] TRK 88-88 TRL WF01

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

South Coast Printing

Copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20868

Date 8-20-07

To MCM MARINE

Address PORTAGE.

City SSM M.

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW				
DUST	NBY LUMBER			
IN	108,780			
OUT	58,200			
NET	58560 LBS			
	29.29 TNS			

DRIVER SIGNATURE [signature] TRK _____ TRL _____

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sault Printing

Copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20872

Date 8-21-07

To MCM MARINE

Address PORTAGE AVE

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW				
DUST.	NBY LUMBER			
		IN	108,780	
		OUT	52,400	
		NET	56,380 lbs	
			=28,19 tons	

DRIVER SIGNATURE [signature] TRK 77-77 TRL WF9

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Copy

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20874

Date 8-22-07

To MCM MARINE

Address PORTAGE

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SPW				
DUST	NBYWOOD			
		IN	103960	
		OUT	52,300	
		NET	51,660	

DRIVER SIGNATURE [signature] TRK 77-77 TRL WI-01

CUSTOMER SIGNATURE [signature]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Zellar Bark & Trucking, Inc

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

20956

Date 8/24/07

To MCM

Address

City

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW DUST	Z YARD			13739

DRIVER SIGNATURE Rickey Scott TRK TRL

CUSTOMER SIGNATURE

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Switch Printing

TICKET 13739

TRUCK ID ZELLAR

NORTHERN SAND

24 AUG 07
12:03 PM

DELIVERED TO-

GROSS 127460 LB
TARE 0 LB
NET 127460 LB

NET 63.73 TON

RECEIVED BY-

Zellar Bark & Trucking, Inc

Copy

Bob & Edna Zellar
23662 County Rd. 438
McMillan, MI 49853-9719

Ph: (906) 293-3766
FAX (906) 293-5325

Located in Michigan's Upper Peninsula

20886

Date 8-27-07

To MCM MARINE

Address PORTAGE AVE

City SSM MI

Terms

PRODUCT	FROM	YARDS	TONS	SLIP #
SAW				
DUST	NBY LUMBER			
		IN	103960	
		OUT	51,800	
		NET	52,160	

DRIVER SIGNATURE [illegible] TRK 77-77 TRL WF01

CUSTOMER SIGNATURE [illegible]

~ LANDSCAPING BARK ~

Premium quality, processed uniform in size, rich in color, no ground slabs or pallets.
Only the best bark. We haul or you haul. Wholesale & Retail.

Sawdust Weight Summary

Cannelton Industries/ Tannery Bay

Date	Product	Trucking Company	Ticket Number	Total Weight In (kg)	Total Weight Out (kg)	Net Weight (kgs)	Net Weight (lbs)	Net Weight (Ton)	
10/12/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	20443	28,100	53,650	25,550	56,210	28.11	
10/13/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	20446	27,890	53,100	25,210	55,462	27.73	
10/14/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	20448	27,930	52,200	24,270	53,394	26.70	
10/14/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	20449	28,260	54,500	26,240	57,728	28.86	
10/16/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19607	27,700	54,250	26,550	58,410	29.21	
10/16/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19608	28,740	58,270	29,530	64,966	32.48	
10/20/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19627	27,920	54,930	27,010	59,422	29.71	
10/20/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19621	29,190	59,600	30,410	66,902	33.45	
10/24/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19609	28,910	57,290	28,380	62,436	31.22	
10/24/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19632	28,110	52,690	24,580	54,076	27.04	
10/26/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	18502	28,630	53,700	25,070	55,154	27.58	
10/26/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19638	28,170	50,720	22,550	49,610	24.81	
10/27/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19640	28,250	60,250	32,000	70,400	35.20	
10/31/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19508	28,890	50,150	21,260	46,772	23.39	
11/1/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	19646	28,730	50,400	21,670	47,674	23.84	
11/6/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	18551	29,500	53,490	23,990	52,778	26.39	
11/6/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	18552	29,300	52,470	23,170	50,974	25.49	
11/8/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	18554	28,870	52,764	23,894	52,566	26.28	
11/14/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	18528	27,682	53,664	25,982	57,160	28.58	
11/14/2006	Dry Sawdust	Zellar Bark and Trucking, Inc.	18530	28,660	49,650	20,990	46,178	23.09	
							2006 Tonnage	**559.14**	
6/28/2007	Sawdust	Zellar Bark and Trucking, Inc.					47,080	23.54	
7/2/2007	Sawdust	Zellar Bark and Trucking, Inc.	13072/19393					26.60	
7/9/2007	Sawdust	Unknown	14589	22,330	50,510	28,180	61,996	31.00	
7/11/2007	Sawdust							27.33	Average Sawdust load substitued
7/17/2007	Sawdust	Zellar Bark and Trucking, Inc.	20593	22,730	42,150	19,420	42,724	21.36	for missing ticket
7/17/2007	Sawdust	Zellar Bark and Trucking, Inc.	20596	22,690	42,510	19,820	43,604	21.80	
7/19/2007	Sawdust	Zellar Bark and Trucking, Inc.	20705				62,000	31.00	
7/30/2007	Sawdust	Zellar Bark and Trucking, Inc.	20723				55,700	27.85	
8/6/2007	Sawdust	Zellar Bark and Trucking, Inc.	20734				53,880	26.94	
8/9/2007	Sawdust	Zellar Bark and Trucking, Inc.	20742				61,860	30.93	
8/9/2007	Sawdust	Zellar Bark and Trucking, Inc.	20741				58,780	29.39	
8/10/2007	Sawdust	Zellar Bark and Trucking, Inc.	20747	22,310	41,200	18,890	41,558	20.78	
8/13/2007	Sawdust	Zellar Bark and Trucking, Inc.	20748				58,720	29.36	
8/15/2007	Sawdust	Zellar Bark and Trucking, Inc.	20854				59,460	29.73	
8/16/2007	Sawdust	Zellar Bark and Trucking, Inc.	20858				60,680	30.34	
8/17/2007	Sawdust	Zellar Bark and Trucking, Inc.	20863				58,360	29.18	
8/17/2007	Sawdust	Zellar Bark and Trucking, Inc.	20865	22,230	42,580	20,350	44,770	22.39	
8/20/2007	Sawdust	Zellar Bark and Trucking, Inc.	20868				58,580	29.29	
8/20/2007	Sawdust	Zellar Bark and Trucking, Inc.	20870	22,110	40,840	18,730	41,206	20.60	
8/21/2007	Sawdust	Zellar Bark and Trucking, Inc.	20872				56,380	28.19	
8/22/2007	Sawdust	Zellar Bark and Trucking, Inc.	20874				51,660	25.83	
8/24/2007	Sawdust	Zellar Bark and Trucking, Inc.	20956				127,460	26.50	
8/27/2007	Sawdust	Zellar Bark and Trucking, Inc.	20886				52,160	26.08	
							2007 Tonnage	**616.01**	
							Total Project Tonnage	**1175.15**	

RCVD ON 11-9-06
FROM EC

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	10/6/2006	8:26	8:31	Pass	Pad	
2	10/6/2006	8:52	8:57	Pass	Pad	
3	10/6/2006	10:41	10:46	Pass	Pad	MCM added sawdust
4	10/6/2006	10:47	10:52	Pass	Pad	
5	10/6/2006	11:21	11:26	Pass	Pad	
6	10/6/2006	11:40	11:45	Fail	Pad	
7	10/6/2006	11:43	11:48	Pass	Landfill	
8	10/6/2006	11:45	12:04	Pass	Pad	
9	10/6/2006	12:05	12:10	Pass	Pad	
10	10/6/2006	1:03	1:08	Pass	Pad	
11	10/6/2006	1:10	1:15	Pass	Pad	
12	10/6/2006	1:16	1:38	Pass	Pad	
13	10/9/2006	8:05	8:10	Pass	Pad	
14	10/9/2006	8:25	8:30	Fail	Pad	
15	10/9/2006	8:31	8:38	Pass	Pad	
16	10/9/2006	8:39	8:44	Pass	Pad	
17	10/9/2006	8:54	8:59	Fail	Pad	
18	10/9/2006	9:29	9:37	Pass	Pad	
19	10/9/2006	11:59	12:04	Pass	Pad	
20	10/9/2006	1:29	1:34	Pass	Pad	
21	10/9/2006	1:30	1:40	Pass	Pad	
22	10/12/2006	8:08	8:08	Pass	Pad	
23	10/12/2006	8:11	8:10	Pass	Pad	
24	10/12/2006	8:17	8:22	Pass	Pad	
25	10/12/2006	8:23	8:28	Pass	Pad	
26	10/12/2006	9:33	9:38	Pass	Pad	
27	10/12/2006	9:38	9:43	Pass	Pad	
28	10/12/2006	9:44	9:49	Pass	Pad	
29	10/12/2006	9:48	9:53	Pass	Pad	
30	10/12/2006	9:57	10:02	Pass	Pad	
31	10/12/2006	10:22	10:29	Pass	Pad	
32	10/12/2006	2:36	2:41	Pass	Pad	
33	10/13/2006	7:35	7:41	Pass	Pad	
34	10/13/2006	7:35	7:41	Pass	Pad	
35	10/13/2006	9:37	9:48	Pass	Pad	
36	10/13/2006	10:23	10:28	Pass	Pad	
37	10/13/2006	11:57	12:08	Pass	Pad	
38	10/13/2006	1:20	1:26	Pass	Pad	
39	10/14/2006	7:22	7:28	Pass	Pad	
40	10/14/2006	7:27	7:33	Pass	Pad	
41	10/14/2006	7:56	8:08	Pass	Pad	
42	10/14/2006	11:27	11:32	Fail	Pad	
43	10/16/2006	7:39	7:52	Pass	Pad	

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
44	10/16/2006	8:07	8:20	Pass	Pad	
45	10/16/2006	9:27	9:34	Pass	Pad	
45	10/16/2006	11:11	11:20	Pass	Pad	
47	10/17/2006	7:32	7:37	Pass	Pad	
48	10/17/2006	7:51	8:00	Pass	Pad	
49	10/18/2006	7:44	7:51	Pass	Pad	
50	10/18/2006	9:06	9:11	Pass	Pad	
51	10/18/2006	10:59	11:04	Pass	Pad	
52	10/18/2006	11:05	11:10	Pass	Pad	
53	10-23-06	7:07	7:12	PASS	Pad	
54	10-23-06	7:14	7:20	PASS	Pad	
55	10-23-06	8:32	8:39	PASS	Pad	
56	10-23-06	9:31	9:37	PASS	Pad	
57	10-25-06	7:21	7:26	Pass	Pad	
58	10-25-06	8:40	8:45	Pass	Pad	
59	10-26-06	7:20	7:27	Pass	Pad	
60	10-26-06	7:41	7:42	Fail	Pad	
61	10-26-06	8:00	8:09	~~Pass~~	Pad	
62	10-26-06	8:29	8:32	Fail	Pad	
63	10-26-06	8:30	8:32	Fail	Pad	
64	10-26-06	8:50	8:51	Fail	Pad	
65	10-26-06	8:57	8:59	Fail	Pad	
66	10-26-06	9:07	9:09	Fail	Pad	
67	10-26-06	9:40	9:43	Fail	Pad	
68	10-26-06	9:50	9:53	Fail	Pad	
69	10-27-06	7:19	7:20	Fail	Pad	
70	10-27-06	7:27	7:40	Pass	Pad	
71	10-27-06	7:45	7:47	Fail	Pad	
72	10-27-06	10:35	10:43	Pass	Pad	
73	10-27-06	2:14	2:15	Fail ~~Pass~~	Pad	
74	10-27-06	2:15	2:28	Pass	Pad	
75	10-30-06	8:22	8:27	Pass	Pad	
76	10-30-06	9:47	9:52	Fail	Pad	
77	10-30-06	10:09	10:14	Pass	Pad	
78	10-30-06	10:29	10:34	Pass	Pad	
79	10-30-06	11:33	11:34	Fail	Pad	
80	10-30-06	11:36	11:36	Fail	Pad	
81	10-31-06	7:18	7:29	Pass	Pad	
82	10-31-06	7:42	7:49	Pass	Pad	
83	10-31-06	8:07	8:13	Pass	Pad	
84	10-31-06	8:16	8:18	Fail	Pad	

Paint Filter Log

	Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
85	~~128~~	11-2-06	7:06	7:11	Fail	Pad	
86	~~129~~	11-2-06	7:15	7:20	Fail	Pad	
87	~~130~~	11-2-06	8:25	8:30	Fail	Pad	
88	~~131~~	11-2-06	11:00	11:06	Pass	Pad	
89	~~132~~	11-2-06	11:00	11:06	Pass	Pad	
90	~~133~~	11-2-06	11:02	11:07	Pass	Pad	
91	~~134~~	11-2-06	11:17	11:25	Pass	Pad	
92	~~135~~	11-2-06	11:17	11:25	Pass	Pad	
93	~~136~~	11-6-06	7:17	7:22	Fail	Pad	
94	~~137~~	11-6-06	7:17	7:22	Fail	Pad	
95	~~138~~	11-6-06	7:25	7:30	Pass	Pad	
96	~~139~~	11-6-06	7:38	7:44	Pass	Pad	
97	~~140~~	11-6-06	8:14	8:19	Pass	Pad	
98	~~141~~	11-6-06	8:15	8:20	Pass	Pad	
99	~~142~~	11-6-06	8:30	8:36	Pass	Pad	
100	~~143~~	11-6-06	9:45	9:52	Pass	Pad	
101	~~144~~	11-6-06	10:23	10:28	Pass	Pad	
102	~~145~~	11-7-06 ~~11-6-06~~	7:05	7:12	Pass	Pad	
103	~~145~~	11-7-06	7:15	7:33	Pass	Pad	
104	~~147~~	11-7-06	8:16	8:30	Pass	Pad	
105	~~148~~	11-7-06	11:19	11:28	Pass	Pad	
106	149	11-7-06	12:30	12:38	Pass	Pad	
	150						
CSL	151						
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	168						

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
87	6-25-07	7:34	7:39	0	East Side	
88	6-25-07	7:45	7:50	Little	North East	
89	6-25-07	7:56	8:01	2 Drops	North Side	
90	6-25-07	8:43	8:50	0	North "	
91	6-25-07	8:53	8:58	0	North East	
92	6-25-07	9:10	9:15	0	North	
93	6-25-07	10:09	10:14	0	North East	
94	6-25-07	10:25	10:30	0	North Side	
95	6-25-07	10:40	10:45	0	North	
96	6-25	11:50	11:55	0	EAST Side	
97	6-25	12:10	12:16	0	EAST Side	
98	6-25	12:35	12:40	0	East Side	
99	6-25	1:26	1:31	0	East "	
100	6-25	1:33	1:38	0	East "	
101	6-25	1:59	2:04	0	East "	
102	6-25	3:10	3:15	0	"	
103	6-25	3:23	3:28	0	"	
104	6-25	3:40	3:45	0	"	
105	6-25	4:28	4:33	0	"	
106	6-26	10:56	11:01	0	north side	
107	6-26	11:14	11:19	0	EAST Side	
108	6-26	11:47	11:52	0	north side	
109	6-26	12:20	12:25	0	North side	
110	6-26	12:53	12:58	0	North Side	
111	6-26	1:47	1:52	0	North Side	
112	6-26	2:40	2:45	0	North side	
113	6-27	7:07	7:12	0	East side	
114	6-27	7:21	7:26	0	" "	
115	6-27	7:30	7:35	0	North side	
116	6-27	7:40	7:45	0	East Side	
117	6-27	8:19	8:24	0	" "	
118	6-27	8:28	8:33	0	North Side	
119	6-27	8:36	8:41	0	EAST side	
120	6-27	9:03	9:09	2 Drops	EAST side	
121	6-27	9:23	9:28	0	EAST Side	
122	6-27	10:33	10:38	0	East Side	
123	6-27	11:08	11:13	0	East Side	
124	6-27	11:55	12:00	0	East side	
125	6-27	12:42	12:47	0	East side	
126	6-27	1:53	1:58	0	East Side	
127	6-27	2:27	2:32	0	East side	

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	6/27	2:55	3:00	0	East Side	
2	6/27	3:37	3:42	0	East Side	
3	6/27	4:14	4:19	0	East Side	
4	6/28					
5	6/28					
6	6/28					
7	6/28					
8	6/28					
9	6/28					
10	6/28					
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43						

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	6-28	7:00	7:05	0	EAST	
2	6-28	7:16	7:23	0	"	
3	6-28	7:32	7:37	0	"	
4	6/28	8:08	8:13	0	"	
5	6/28	8:13	8:18	0	"	
6	6/28	8:17	8:22	0	South	
7	6/28	8:21	8:26	0	South	
8	6/28	9:32	9:37	TRACE	EAST	
9	6/28	9:33	9:38	TRACE	"	
10	6/28	10:01	10:06	TRACE	"	
11	6/28	10:16	10:21	TRACE	"	
12	6/28	11:20	11:26	TRACE	"	
13	6/28	12:37	12:42	0	"	
14	6/28	1:06	1:11	0	"	
15	6/28	2:01	2:06	0	"	
16	6/28	3:28	3:34	0	"	
17	6/28	4:03	4:08	0	"	
18	6/29	8:19	8:24	0	"	
19	6/29	9:01	9:07	0	"	
20	6/29	9:22	9:27	0	"	
21	6/29	9:51	9:59	0	"	
22	6/29	10:35	10:40	0	"	
23	6/29	11:37	11:42	0	"	
24	6/29	12:37	12:42	0	"	
25	6/29	1:20	1:25	0	"	
26	6/29	2:06	2:11	0	"	
27	6/29	2:45	2:50	0	South	
28	6/29	3:22	3:27	0	East	
29	6/29	4:07	4:12	0	"	
30	6/30	6:10	6:15	0	"	
31	6/30	6:50	6:55	0	East	
32	6/30	7:17	7:22	0	"	
33	6/30	7:19	7:24	0	"	
34	6/30	8:20	8:25	0	"	
35	6/30	8:56	9:01	0	"	
36	6/30	9:07	9:12	0	"	
37	6/30	10:10	10:15	0	"	
38	6/30	10:54	10:59	0	"	
39	6/30	11:25	11:30	0	"	
40	7/2	8:04	8:10	0	EAST	
41	7/2	8:04	8:10	0	EAST	
42	7/2	8:24	8:29	0	"	
43	7/2	8:25	8:31	0	"	

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	7-2-07	7:01	7:06	0	East side	
2	7-2	7:15	7:20	0	" "	
3	7-2	7:33	7:38	0	North Side	
4	7-2	7:48	7:54	0	" "	
5	7-3-07	7:40	7:45	0	EAST	
6	7-3-07	7:41	7:46	0	North	
7						
8						
9						
10						
11						
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43						

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	~~6-29~~	~~[illegible]~~			~~East~~	
2	6-29	7:06	7:11	0	East	
3	~~6/29~~ 7/2	9:22	9:29	0	"	
4	~~6/29~~ 7/2	9:49	9:54	0	"	
5	~~6/29~~ 7/2	10:27	10:32	0	"	
6	~~6/29~~ 7/2	11:01	11:06	0	"	
7	~~6/29~~ 7/2	11:25	11:30	0	"	
8	~~6/29~~ 7/2	11:41	11:46	0	"	
9	~~6/29~~ 7/2	12:22	12:28	0	"	
10	~~6/29~~ 7/2	1:40	1:45	0	"	
11	7/2	2:24	2:29	0	"	
12	7/2	3:07	3:12	0	"	
13	7/2	3:55	4:00	0	"	
14	7/3	8:22	8:27	0	"	
15	7/3	9:09	9:14	0	"	
16	7/3	9:47	9:52	0	"	
17	7/3	10:41	10:46	0	"	
18	7/3	11:43	11:48	0	"	
19	7/3	11:57	12:02	0	"	
20	7/3	12:50	12:55	0	"	
21	7/3	1:18	1:23	0	"	
22	7/3	1:45	1:50	0	"	
23	7/3	2:41	2:46	0	"	
24	7/3	3:16	3:21	0	"	
25	7/3	3:52	3:57	0	"	
26						
27						
28						
29						
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41						
42						
43						

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	~~6-29~~	~~[illegible]~~			~~East~~	
2	6-29	7:06	7:11	0	East	
3	~~6/29~~ 7/2	9:22	9:29	0	"	
4	~~6/29~~ 7/2	9:49	9:54	0	"	
5	~~6/29~~ 7/2	10:27	10:32	0	"	
6	~~6/29~~ 7/2	11:01	11:06	0	"	
7	~~6/29~~ 7/2	11:25	11:30	0	"	
8	~~6/29~~ 7/2	11:41	11:46	0	"	
9	~~6/29~~ 7/2	12:22	12:28	0	"	
10	~~6/29~~ 7/2	1:40	1:45	0	"	
11	7/2	2:24	2:29	0	"	
12	7/2	3:07	3:12	0	"	
13	7/2	3:55	4:00	0	"	
14	7/3	8:22	8:27	0	"	
15	7/3	9:09	9:14	0	"	
16	7/3	9:47	9:52	0	"	
17	7/3	10:41	10:46	0	"	
18	7/3	11:43	11:48	0	"	
19	7/3	11:57	12:02	0	"	
20	7/3	12:50	12:55	0	"	
21	7/3	1:18	1:23	0	"	
22	7/3	1:45	1:50	0	"	
23	7/3	2:41	2:46	0	"	
24	7/3	3:16	3:21	0	"	
25	7/3	3:52	3:57	0	"	
26						
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43						

Paint Filter Log

Name_____ Date: 7/5/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:42	6:47	0	East	
2	7:16	7:21	0	"	
3	8:07	8:12	Trace	"	
4	8:49	8:54	0	"	
5	9:23	9:28	0	"	
6	9:57	10:02	0	"	
7	10:34	10:39	0	"	
8	11:28	11:33	0	"	
9	12:16	12:21	0	"	
10	1:11	1:16	0	"	
11	1:51	1:56	0	"	
12	2:54	2:59	2 Drops	"	
13	3:00	3:05	0	"	
14	3:47	3:52	0	"	
15	4:45	4:50	0	"	
16					
17					
18					
19					
20					
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22					
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41					

Paint Filter Log

Name Ryan Palmer Date: 7/6/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:48	6:53	0	EAST	
2	6:56	7:01	0	EAST	
3	7:20	7:25	0	"	
4	8:08	8:13	0	"	
5	8:43	8:48	0	"	
6	10:13	10:18	0	"	
7	10:41	10:46	0	"	
8	11:26	11:31	0	"	
9	12:00	12:05	0	"	
10	1:09	1:14	0	"	
11	1:45	1:50	0	"	
12	2:37	2:42	0	"	
13	3:16	3:21	0	"	
14	3:48	3:53	0	"	
15	4:17	4:22	0	"	
16					
17					
18					
19					
20					
21					
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Paint Filter Log

Name: Ryan Palmer Date: 6/7/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:43	6:48	0	EAST	
2	7:05	7:10	0	"	
3	8:08	8:13	0	"	
4	8:38	8:43	0	"	
5	9:11	9:16	0	"	
6	9:41	9:46	0	"	
7	10:14	10:19	0	"	
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	7-9-07	6:41	6:46	~~Trace~~ Fail	East side	
2	7-9-07	6:56	7:01	Fail	" "	
3	7-9-07	7:04	7:09	Fail	" "	
4	7-9-07	7:12	7:19	Fail	South East	
5	7-9-07	7:21	7:26	Fail	North side	
6	7-9-07	10:03	10:08	Fail	East side	
7	~~7-10-07~~	6:31	6:36	PASS	EAST side	
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
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36						
37						
38						
39						
40						
41						
42						
43						

Paint Filter Log

Name Ryan Palmeir Date: 7/9/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1				DIRT was Passing At 12:00	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
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27					
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35					
36					
37					
38					
39					
40					
41					

Paint Filter Log

Name Ryan Palmer Date: 7/9/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1				DIRT was Passing At 12:00	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
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Paint Filter Log

Name Ryan Palmer Date: 7/10/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:30	6:35	0	EAST	
2	6:59	7:04	0	North	
3	6:59	7:04	0	North	
4	8:08	8:13	0	EAST	
5	8:44	8:49	0	"	
6	9:45	9:50	0	"	
7	10:24	10:29	0	"	
8	11:21	11:26	0	"	
9	11:42	11:47	0	"	
10	12:50	12:55	0	"	
11	1:30	1:35	0	"	
12	2:00	2:05	0	"	
13	2:54	2:59	0	"	
14	3:25	3:30	0	"	
15	4:14	4:19	2 Drops	"	
16	4:37	4:42	0	"	
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					

Paint Filter Log

Name Ryan Palmer Date: 7/10/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:30	6:35	0	EAST	
2	6:59	7:04	0	North	
3	6:59	7:04	0	North	
4	8:08	8:13	0	EAST	
5	8:44	8:49	0	"	
6	9:45	9:50	0	"	
7	10:24	10:29	0	"	
8	11:21	11:26	0	"	
9	11:42	11:47	0	"	
10	12:50	12:55	0	"	
11	1:30	1:35	0	"	
12	2:00	2:05	0	"	
13	2:54	2:59	0	"	
14	3:25	3:30	0	"	
15	4:14	4:19	2 Drops	"	
16	4:37	4:42	0	"	
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
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37					
38					
39					
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Paint Filter Log

Name: Ryan Palmer Date: 7-11-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:45	6:50	1 Drop	East	
2	6:55	7:00	0	"	
3	7:03	7:08	0	"	
4	7:39	7:44	0	"	
5	8:12	8:17	0	"	
6	9:08	9:13	0	"	
7	9:32	9:37	0	"	
8	10:03	10:08	0	"	
9	10:45	10:50	0	"	
10	11:26	11:31	0	"	
11	12:40	12:45	0	"	
12	1:11	1:16	0	"	
13	1:49	1:54	0	"	
14	2:22	2:27	0	"	
15	2:57	3:02	0	"	
16	3:45	3:50	0	"	
17	4:30	4:35	0	"	
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
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34					
35					
36					
37					
38					
39					
40					
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Paint Filter Log

Name: Don Anderson Date: 7-12-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:23	6:28	PASS	EAST	
2	6:36	6:41	Fail	North	
3	9:22	9:27	Pass	East	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
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34					
35					
36					
37					
38					
39					
40					
41					

Paint Filter Log

Name Ryan Palmer Date: 7-12-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:35	6:40	Faild	~~East~~ South	
2	6:45	6:50	Pass	~~East~~	
3	7:09	7:14	Pass	" "	
4	8:05	8:10	Pass	" "	
5	8:40	8:45	Pass	" "	
6	9:10	9:15	Pass	"	
7	10:00	10:05	Pass	"	
8	10:26	10:31	Pass	"	
9	10:59	11:04	Pass	"	
10	11:34	11:39	Pass	"	
11	11:54	11:59	Pass	"	
12	12:25	12:30	Pass	"	
13	12:52	12:57	Pass	"	
14	1:17	1:22	Pass	"	
15	1:36	1:41	Faild	"	
16	1:46	1:51	Faild	"	
17			RAIN		
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
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31					
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36					
37					
38					
39					
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Paint Filter Log

Name Ryan Palmer Date: 7/13/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:59	7:04	Fail	North	
2	7:12	7:17	Pass	North	
3	7:41	7:46	Pass	North	
4	8:21	8:26	Pass	North	
5	8:50	8:55	Pass	East	
6	9:22	9:27	Pass	East	
7	10:04	10:09	Pass	East	
8	10:35	10:40	Pass	"	
9	12:15	12:20	Pass	"	
10	12:41	12:46	Pass	"	
11	1:31	1:36	Pass	"	
12	1:51	1:56	Pass	"	
13	2:23	2:28	Pass	"	
14	3:04	3:09	Pass	"	
15	3:30			Stopped hauling landfill	
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
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37					
38					
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Paint Filter Log

Name Don Anderson Date: 7-13-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:28	6:33	Fail	East	
2	6:35	6:40	Pass	East	
3	6:38	6:43	Pass	East	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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Paint Filter Log

Name Ryan Dalmeir Date: 7/16/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:51	6:56	Pass	East	
2	7:10	7:15	Pass	"	
3	7:30	7:35	Pass	"	
4	8:39	8:44	Pass	"	
5	8:57	9:02	Pass	"	
6	9:48	9:53	Pass	"	
7	10:18	10:23	Pass	"	
8	10:41	10:46	Pass	"	
9	11:17	11:22	Pass	"	
10	11:45	11:50	Pass	"	
11	12:29	12:34	Pass	"	
12	12:59	1:04	Pass	"	
13	1:29	1:34	Pass	"	
14	2:23	2:28	Pass	"	
15	2:57	3:02	Pass	"	
16	3:19	3:24	Pass	"	
17	4:06	4:11	Pass	"	
18	4:24	4:29	Pass	"	
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
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33					
34					
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36					
37					
38					
39					
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Paint Filter Log

Name Don Anderson Date: 2-16-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:21	6:26	Pass	East	
2	6:30	6:35	Pass	West Side	
3	6:40	6:45	Fail	" "	
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
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32					
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34					
35					
36					
37					
38					
39					
40					
41					

Paint Filter Log

Name John Jones

Date: 7-17-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	8:05	8:10	Pass	South	
2	8:28	8:33	Failed	West	
3	10:55	11:00	Pass	East	
4	11:25	11:30	Pass	"	
5	11:50	11:55	Pass	"	
6	12:31	12:36	Pass	"	
7	1:01	1:06	Pass	"	
8	1:28	1:33	Pass	"	
9	2:09	2:14	Pass	"	
10	2:48	2:53	Pass	"	
11	3:10	3:15	Failed	"	
12	3:27	3:32	Failed	"	mix saw Dust
13	4:08	4:13	Pass	"	
14	4:26	4:31	Pass	"	
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
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36					
37					
38					
39					
40					
41					

Paint Filter Log

Name Don Anderson Date: 7-17-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:18	6:23	Pass	Eastside	
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
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36					
37					
38					
39					
40					
41					

Paint Filter Log

Name Ryan Palmer Date: 7/18/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:35	6:40	Pass	East	
2	7:08	7:13	Pass	"	
3	7:51	7:56	Pass	North	
4	8:25	8:30	Pass	East	
5	8:53	8:58	Pass	East	
6	9:44	9:49	Pass	North	
7	9:46	9:51	Failed	West	
8	10:22	10:27	Pass	East	
9	10:24	10:29	Pass	"	
10	11:22	11:27	Failed	"	
11	11:38	11:45	Pass	"	
12	12:05	12:12	Pass	"	
13	12:59	1:06	Pass	"	
14	1:32	1:39	Pass	"	
15	1:54	1:59	Failed	"	
16	2:38	2:45	Pass	"	
17	3:10	3:18	Pass	"	
18	3:36	3:43	Pass	"	
19	4:20	4:27	Pass	"	
20					
21					
22					
23					
24					
25					
26					
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36					
37					
38					
39					
40					
41					

Paint Filter Log

Name Ryan Palmer Date: 7-19-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:44	6:49	Pass	East	
2	6:56	7:03	Pass	East	
3	8:06	8:13	Pass	"	
4	8:25	8:32	Pass	"	
5	8:57	9:02	Pass	"	
6	9:52	10:00	Pass	"	
7	10:20	10:27	Pass	"	
8	10:44	10:49	Pass	"	
9	11:42	11:49	Pass	"	
10	12:14	12:20	Pass	"	
11	12:40	12:45	Pass	"	
12	1:31	1:36	Failed	"	
13	1:41	1:44	Failed	North	
14	1:48	1:53	Failed	East	
15	2:00	2:05	Pass	"	
16	2:33	2:38	Pass	"	
17	3:06	3:12	Pass	"	
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
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36					
37					
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39					
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Brian Tremblay

Paint Filter Log

Name Ryan Palmer Date: 7-20-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:30	6:35	Pass	East	
2	6:57	7:02	Pass	"	
3	7:20	7:25	Pass	South	
4	7:55	8:00	Pass	North	
5	8:30	8:35	Pass	North	
6	8:40	8:45	Pass	east	
7	8:50	8:55	Pass	North	
8	9:27	9:34	Pass	North	
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
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36					
37					
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39					
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41					

Paint Filter Log

Name: Brian T.

Date: 7-23-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	0630	6:35	Pass	east	
2	6:50	6:55	Pass	North	
3	7:10	7:15	Pass	east	
4	8:10	8:15	Pass	North	
5	8:25	8:30	Pass	West	
6	8:42	8:47	Pass	North	
7	9:00	9:05	Pass	east	
8	9:45	9:51	Pass	east	
9	10:17	10:22	Pass	North	
10	11:20	11:25	Pass	North	
11	11:47	11:52	Pass	east	
12	12:57	1:02	Pass	east	
13	1:20	1:25	Pass	North	
14	1:37	1:42	Pass	North	
15	2:57	3:02	Pass	West	
16	3:15	3:20	Pass	North	
17	4:13	4:18	Pass	east	
18	4:28	4:33	Failed	West	
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					

Paint Filter Log

Name Brian T. Date: 7-24-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:37	6:42	Pass	North	
2	6:55	7:00	Pass	east	
3	7:35	7:40	Pass	east	
4	8:10	8:15	Pass	North	
5	8:30	8:35	Pass	~~North~~ east	
6	8:51	8:56	Pass	North	
7	9:46	9:51	Pass	east	
8	10:08	10:13	Pass	east	
9	10:30	10:35	Pass	North	
10	11:10	11:15	Failed	~~east~~ West	
11	11:42	11:47	Passed	North	
12	12:07	12:12	Passed	east	
13	12:58	12:03	Passed	West	
14	1:10	1:15	Pass	North	
15	1:30	1:35	Pass	North	
16	1:53	1:58	Pass	east	
17	3:00	3:05	Failed	west	
18	3:35	3:40	Pass	east	
19	3:53	3:58	Pass	North	
20	4:28	4:32	Pass	east	
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					

Paint Filter Log

Name: Brian T.

Date: 7-~~25~~ 27 07 57/30/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:23	6:29	Pass	North	
2	6:45	6:50	Pass	east	
3	7:05	7:10	Pass	North	
4	8:15	8:20	Pass	North	
5	8:50	8:55	Pass	South	
6	9:35	9:40	Pass	North	
7	10:06	10:11	Pass	North	
8	10:18	10:23	Failed	North	Recently Dumped
9	10:32	10:37	Passed	North	
10	11:20	11:25	Passed	east	
11	11:43	11:48	Passed	North	
12	1:00	1:05	Passed	east	
13	1:29	1:34	Failed	North	Mixed Sawdust
14	2:42	2:47	Passed	east	
15	3:00	3:05	Passed	north	
16	4:19	4:24	Passed	North	
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					

Paint Filter Log

Name: Brian T

Date: 7-30-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:43	6:48	Pass	east	
2	6:47	6:52	Pass	North	
3	7:00	7:05	Pass	east	
4	8:04	8:09	Pass	North	
5	8:23	8:28	Pass	South	
6	9:38	9:42	Pass	North	
7	10:00	10:05	Pass	North	
8	10:36	10:41	Pass	north	
9	11:10	11:15	Pass	north	
10	11:30	11:35	Pass	North	
11	11:50	11:55	Pass	North	
12	12:30	1235	Failed	north	Mixed Sawdust
13	12:48	12:53	Passed	North	
14	1:05	1:10	Passed	east	
15	1:22	1:27	Pass	east	
16	2:44	2:49	Pass	North	
17	3:00	3:05	Pass	east	
18	3:57	4:02	Pass	North	
19	4:16	4:21	Pass	North	
20	4:36	4:41	Pass	North	
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					

Paint Filter Log

Name Victor Voorhees Date: 7-31-07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:22	6:27	PASS		
2	6:44	6:49	PASS		
3	7:22	7:27	PASS		
4	8:19	8:24	PASS		
5	8:45	8:50	PASS		
6	9:45	9:50	PASS		
7	10:20	10:25	PASS		
8	11:25	11:30	PASS		
9	11:59	12:04	PASS		
10	12:48	12:53	PASS		
11	1:38	1:43	PASS		
12	2:22	2:27	PASS		
13	3:17	3:22	PASS		
14	3:58	4:03	PASS		
15	4:40	4:45	PASS		
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
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27					
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VICTOR VOORHEES -

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	08/01/07	6:16	6:21	PASS		
2		6:52	6:57	PASS		
3		7:23	7:28	PASS		
4		8:00	8:05	PASS		
5		8:37	8:42	PASS		
6		9:14	9:19	PASS		
7		10:05	10:10	PASS		
8		10:40	10:45	PASS		
9		11:24	11:29	PASS		
10		12:08	12:13	PASS		
11		1:00	1:05	PASS		
12		1:35	1:40	PASS		
13		2:10	2:15	PASS		
14		3:05	3:10	PASS		
15						
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Victor Voorhees 08/02/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8/2/07	6:15	6:20	PASS		
2		6:50	6:55	PASS		
3		7:35	7:40	PASS		
4		8:15	8:20	PASS		
5		8:50	8:55	PASS		
6		9:30	9:35	PASS		
7		10:20	10:25	PASS		
8		11:10	11:15	PASS		
9		11:50	11:55	PASS		
10		12:45	12:50	PASS		
11		1:15	1:20	PASS		
12		2:00	2:05	PASS		
13		2:45	2:50	PASS		
14		3:25	3:30	PASS		
15		3:59	4:04	PASS		
16		4:30	4:35	PASS		
17						
18						
19						
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Victor Voorhees

8/3/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	08/03/07	6:12	6:17	PASS		
2		6:47	6:52	PASS		
3		7:22	7:27	PASS		
4		7:28	7:33	PASS	NW CORNER	
5		7:28	7:33	PASS	N W CORNER	
6		8:03	8:08	PASS		
7		8:32	8:37	PASS		
8		8:58	9:03	PASS		
9		9:30	9:35	PASS		
10		10:05	10:10	PASS		
11		10:42	10:47	PASS		
12		11:12	11:17	PASS		
13		11:45	11:50	PASS		
14		1235	12:40	PASS		
15		1:20	1:05	PASS		
16		1:52	1:57	PASS		
17		226	2:31	PASS		
18		3:01	3:06	PASS		
19		3:38	3:43	PASS		
20		4:14	4:19	PASS		
21		4:48	4:53	PASS		
22						
23						
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VICTOR VOURHEES

Paint Filter Log

8/4/07

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8-4-07	6:05	6:10	PASS		
2		6:30	6:35	PASS		
3		6:47	6:52	PASS		
4		7:29	7:34	PASS		
5		8:15	8:20	PASS		
6		8:47	8:52	PASS		
7		8:52	8:57	PASS		
8		9:24	9:29	PASS		
9		10:00	10:05	PASS		
10		10:31	10:36	PASS		
11		11:09	11:14	PASS		
12		11:50	11:55	PASS		
13						
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Paint Filter Log

Name Victor Voorhees Date: 8/6/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:05	6:10	PASS		
2	6:35	6:40	PASS		
3	7:06	7:11	PASS		
4	7:42	7:47	PASS		
5	7:43	7:48	PASS		SAWDUST MIX
6	8:16	8:21	PASS		
7	8:48	8:53	PASS		
8	9:22	9:27	PASS		
9	9:55	10:00	PASS		
10	10:25	10:30	PASS		
11	11:21	11:26	PASS		
12	11:51	11:56	PASS		
13	12:42	12:47	PASS		
14	1:28	1:33	PASS		
15	2:24	2:29	PASS		NORTH WEST corner
16	2:25	2:30	PASS		NORTHWEST CORNER
17	2:59	3:04	PASS		
18	3:35	3:40	PASS		
19	4:10	4:15	PASS		
20	4:42	4:47	PASS		
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8/7/07

Victor Voorhees

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8/7/07	6:08	6:13	PASS		
2		6:49	6:54	PASS		
3		6:51	6:56	PASS	N.W. CORNER	
4		7:25	7:30	PASS		
5		8:00	8:05	PASS		
6		8:48	8:53	PASS		
7		9:32	9:37	PASS		
8		10:01	10:06	PASS		
9		10:36	10:41	PASS		
10		11:16	11:21	PASS		
11		11:49	11:54	PASS		
12		12:31	12:36	PASS		
13		1:03	1:08	PASS		
14		1:34	1:39	PASS		
15		2:14	2:19	PASS		
16		2:49	2:54	PASS		
17		3:27	3:32	PASS		
18		404	409	PASS		
19		440	445	PASS		
20						
21						
22						
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24						
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Paint Filter Log

Name: Victor Voorhees Date: 8/8/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:22	6:27	PASS		
2	6:50	6:55	PASS		
3	7:20	7:25	PASS		
4	7:51	7:56	PASS		
5	8:22	8:27	PASS		
6	8:57	9:02	PASS		
7	9:34	9:39	PASS		
8	9:59	10:04	PASS		
9	10:36	10:41	FAILED AT 5 mins - SAWDUST ADDED PROBLEM RESOLVED		
10	10:37	10:42	" "	" "	" " BEFORE LOADI
11	10:47	10:52	PASS		
12	10:50	10:55	PASS		
13	11:32	11:37	PASS		
14	12:04	12:09	PASS		
15	12:38	12:43	PASS		
16	1:15	1:20	PASS		
17	1:38	1:43	PASS		SAWDUST MIX
18	1:54	1:59	PASS		SAWDUST MIX
19	2:27	2:32	PASS		
20	3:02	3:07	PASS		
21	3:38	3:43	PASS		
22	4:03	4:08	PASS		
23	4:38	4:43	PASS		
24					
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Victor Voorhees

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8/9/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8/9/07	6:10	6:15	PASS		
2		6:35	6:40	PASS		
3		7:10	7:15	PASS		
4		7:45	7:50	PASS		
5		8:20	8:25	PASS		
6		9:05	9:10	PASS		
7		9:45	9:50	PASS		
8		10:19	10:24	PASS		
9		10:56	11:01	PASS		
10		11:32	11:37	PASS		
11		12:06	12:11	PASS		
12		12:55	1:00	PASS		
13		1:30	1:35	PASS		
14		2:04	2:09	PASS		
15		2:36	2:41	PASS		
16		3:10	3:15	PASS		
17		3:30	3:35	PASS		
18		3:35	3:40	PASS		
19		4:11	4:16	PASS		SAWDUST MIX
20		4:45	4:50	PASS		
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Victor Voorhees 8/11/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8-11-07	6:13	6:18	PASS		
2		6:38	6:43	PASS		
3		7:18	7:23	PASS		
4		7:57	8:02	PASS		
5		835	8 40	PASS		
6		9:12	9:17	PASS		
7		9:47	9:52	PASS		
8		10:15	10:20	PASS		
9						
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Victor Voorhees

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8/13/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8-13-07	6:05	6:10	PASS		
2		6:35	6:40	PASS		
3		7:12	7:17	PASS		
4		7:47	7:52	PASS		
5		8:22	8:27	PASS		
6		8:56	9:01	PASS		
7		9:22	9:27	PASS		
8		9:58	10:03	PASS		
9		10:29	10:34	PASS		
10		1104	1108	PASS		
11		11:39	11:44	PASS		
12		12:15	12:20	PASS		
13		12:55	1:00	PASS		
14		1199	1:24	PASS		
15		1:47	1:52	PASS		
16		2:28	233	PASS		
17		3:02	307	PASS		
18		339	3:44	PASS		
19		4:08	4:13	PASS		
20		444	449	PASS		
21						
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Paint Filter Log

Name Victor Voorhees

Date: 08/14/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:07	6:12	PASS		
2	6:31	6:36	PASS		
3	7:06	7:11	PASS		
4	7:32	7:37	PASS		
5	8:00	8:05	PASS		
6	8:35	8:40	PASS		
7	9:12	9:17	PASS		
8	9:38	9:43	PASS		
9	10:13	10:18	PASS		
10	10:41	10:46	PASS		
11	11:12	11:17	PASS		
12	11:47	11:52	PASS		
13	11:55	12:00	PASS		
14	12:29	12:34	PASS		
15	1:07	1:12	PASS		
16	1:26	1:31	PASS		
17	2:01	2:06	PASS		
18	2:39	2:44	PASS		
19	3:18	3:23	PASS		
20	3:54	3:59	PASS		
21	4:18	4:23	PASS		
22	4:45	4:50	PASS		
23					
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Paint Filter Log

Name Victor Voorhees Date: 8/15/07

Sample #	Time Started	Time Stopped	Result	Location	Comments
1	6:05	6:10	PASS		
2	6:31	6:36	PASS		
3	6:48	6:53	PASS		
4	7:23	7:28	PASS		
5	7:58	8:03	PASS		
6	8:27	8:32	PASS		
7	8:59	9:04	PASS		
8	9:39	9:44	PASS		
9	10:19	10:24	PASS		
10	11:00	11:05	PASS		
11	11:31	11:36	PASS		
12	12:03	12:08	PASS		
13	12:43	12:48	PASS		
14	1:17	1:22	PASS		
15	134	139	PASS		SAWDUST MIX
16	206	211	PASS		
17	241	246	PASS		
18	322	327	PASS		
19	347	352	PASS		
20	419	424	PASS		
21	442	447	PASS		
22					
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Victor Voorhees

8/16/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8-16-07	6:08	6:13	PASS		
2		6:32	6:37	PASS		
3		7:02	7:07	PASS		
4		7:36	7:41	PASS		
5		8:12	8:17	PASS		
6		8:49	8:54	PASS		
7		9:26	9:31	PASS		
8		10:03	10:08	PASS		
9		10:36	10:41	PASS		
10		11:08	11:13	PASS		
11		11:45	11:50	PASS		
12		12:21	12:26	PASS		
13		12:59	1:04	PASS		
14		1:28	1:33	PASS		
15		206	2:11	PASS		
16		2:44	2:49	PASS		
17		3:12	3:17	PASS		
18		3:42	3:47	PASS		
19		4:13	4:18	PASS		
20		4:37	4:42	PASS		
21						
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8-17-07

Victor Voorhees

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8-17-07	6:03	6:08	PASS		
2		6:34	6:39	PASS		
3		7:07	7:12	PASS		
4		7:43	7:48	PASS		
5		8:04	8:09	PASS		
6		8:26	8:31	PASS		
7		9:01	9:06	PASS		
8		9:40	9:45	PASS		
9		10:18	10:23	PASS		
10		10:56	11:01	PASS		
11		11:28	11:33	PASS		
12						
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Victor Voorhees 8/18/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8-18-07	6:06	6:11	PASS		
2		6:26	6:31	PASS		
3		6:53	6:58	PASS		
4		7:28	7:33	PASS		
5		8:00	8:05	PASS		
6		8:35	8:40	PASS		
7		9:05	9:10	PASS		
8		9:42	9:47	PASS		
9		10:11	10:16	PASS		
10		10:49	10:54	PASS		
11		11:20	11:25	PASS		
12						
13						
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Victor Voorhees

Copy
8-20-07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8-20-07	6:03	6:08	PASS		
2		6:30	6:35	PASS		
3		7:01	7:06	PASS		
4		7:35	7:40	PASS		
5		8:07	8:12	PASS		
6		8:40	8:45	PASS		
7		9:15	9:20	PASS		
8		9:53	9:58	PASS		
9		10:26	10:31	PASS		
10		11:05	11:10	PASS		
11		11:45	11:50	PASS		
12		12:20	12:25	PASS		
13		12:51	12:56	PASS		
14		1:27	132	PASS		
15		143	148	PASS		
16		2:19	2:24	PASS		
17		2:53	2:58	PASS		
18		3:26	3:31	PASS		
19		4:04	4:09	PASS		
20		423	428	PASS		
21						
22						
23						
24						
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Victor Voorhees

8/21/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8-21-07	610	615	PASS		
2		645	650	PASS		
3		7:31	7:36	PASS		
4						
5						
6						
7						
8						
9						
10						
11						
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14						
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Victor Voorhees

8/24/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8/24/07	6:05	6:10	PASS		
2		6:22	6:27	PASS		
3		6 59	7:04	PASS		
4		7:32	7:37	PASS		
5		8:02	8:07	PASS		
6		8:42	8:47	PASS		
7		9:15	9:20	PASS		
8		9:52	9:57	PASS		
9		10:30	10:35	PASS		
10		11:06	11:11	PASS		
11		11:41	11:46	PASS		
12		12:15	12:20	PASS		
13		12:50	12:55	PASS		
14		1:20	1:25	PASS		
15		1:50	1:55	PASS		
16		2:26	2:31	PASS		
17		2:59	3:04	PASS		
18		3:16	3:21	PASS		
19						
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Victor Voorhees

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8/27/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8/27/07	6:05	6:10	PASS		
2		6:30	6:35	PASS		
3		7:05	7:10	PASS		
4		7:50	7:55	PASS		
5		8:30	8:35	PASS		
6		9:01	9:06	PASS		
7		9:36	9:41	PASS		
8		10:11	10:16	PASS		
9		10:50	10:55	PASS		
10		11:24	11:29	PASS		
11		11:38	11:43	PASS		
12		12:11	12:16	PASS		
13		12:45	12:50	PASS		
14		1:30	1:35	PASS		
15		2:09	2:14	PASS		
16		2:48	2:53	PASS		
17		3:22	3:27	PASS		
18		3:56	4:01	PASS		
19		4:22	4:27	PASS		
20						
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Victor Voorhees
8-29-07

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Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8/29/07	6:06	6:11	PASS		
2		6:18	6:23	PASS		
3		6:56	7:01	PASS		
4		7:35	7:40	PASS		
5		8:11	8:16	PASS		
6		8:50	8:55	PASS		
7		9:20	9:25	PASS		
8		9:55	10:00	PASS		
9						
10						
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Victor Voorhees

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8/30/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8/30/07	6:17	6:22	PASS		
2		6:47	6:52	PASS		
3		7:20	7:25	PASS		
4		7:55	8:00	PASS		
5		8:50	8:55	PASS		
6		9:30	9:35	PASS		
7		10:10	10:15	PASS		
8		11:15	11:20	PASS		
9		11:55	12:00	PASS		
10		12:40	12:45	PASS		
11		1:25	1:30	PASS		
12		158	203	PASS		
13		2:35	240	PASS		
14		3:05	3:10	PASS		
15		3:50	3:55	PASS		
16		4:20	425	PASS		
17						
18						
19						
20						
21						
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Vic Pt Voorhees

8/31/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	8/31/07	6 22	627	PASS		
2		6 59	704	PASS		
3		740	745	PASS		
4		8:15	8:20	PASS		
5		9:00	9:05	PASS		
6		9:59	10:04	PASS		
7		10:47	10:52	PASS		
8		11:37	11:42	PASS		
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VICTOR VOORHEES

9/4/07

Paint Filter Log

Sample #	Date Tested	Time Started	Time Stopped	Result	Location	Comments
1	9/4/07	635	640	PASS		
2		658	703	PASS		
3		731	736	PASS		
4		8:20	8:25	PASS		
5		9:00	9:05	PASS		
6		9:35	9:40	PASS		
7		10:20	10:25	PASS		
8		11:00	11:05	PASS		
9		11:03	11:08	PASS		SAND ONLY MIX
10		11:40	11:45	PASS		
11		12:42	12:47	PASS		
12		1:15	1:20	PASS		
13		147	152	PASS		
14		2:10	2:15	PASS		
15		2:47	252	PASS		
16		3:21	326	PASS		
17		4:04	409	PASS		
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Attendees:
WESTON: J. Burton, S. Bosko, C. Lantinga, A. Dickinson
US EPA: M. Tuchman
PD: D. Johnson
CRA: R. Bressan, K. Malo

1330-1430 – Weekly Progress Meeting at Ramada (Scheduled time for meeting)

Follow-Up Questions Regarding Morning Tours

- No questions from morning tours
- Estimate for dredged amount so far, area that was dredged estimation, could as EC when arrive for date
- Measure Volume as go along

Progress Made to Date

- Burton – To begin dredging on 27 Sept, completed activities are mobilization, dredging in currently being conducted
- AS of this morning, MCM stated entrance/access dredging would b e completed by tomorrow
- MCM stating that current spot that located in would be most that will need to be removed
- Plan submitted by MCM, disputed right now change order, access change order was not MCM responsibility, but WESTON denied change, and MCM had to proceed to not breech contract.
- Information that MCM submitted was weak, and WESTON found fault in the information provided.
- CSL will pull together documentation to follow up and be able to refute the claim by MCM
- WESTON will provide a large amount of information regarding the dispute will
- EC will attempt to get a large change order
- WESTON commented on add mixtures, not payable in the contract, but EC believes should get paid for add mixtures

Anticipated Problem Areas and Recommended Solutions

- None of the change orders should slow work down, but MCM has to proceed with work to not breach contract.
- Not working right with treatment system and trucking
- Argument from EC is that conditions have changed from last year to this year. Had opportunity in re-bid to change of conditions
- EC may not have been aware that the dredging plan needed to be changed
- Big side issue, but need to continue
- Main issue, three weeks behind and EC seems to be taking time
- Shallow water and sediments inside the Bay, discussed alternatives this morning regarding

- Reevaluate need for the Kingfisher, and see if barge could be maneuvered with a smaller craft.
- MCM spoke about putting in anchors and winching the barge across verbally
- Other problems – Schedule stated would finish at October, talking about extending permit to end of November. Spoke with M. Crain regarding permit, needs time to extend the permit (Bruce)
- Problem, probed every 100-feet in Bay, as working out in bay dredging to specified amount, still going to the sand in areas if not reached at depth specified. Do not want to add more volume than necessary. MCM did probe deeper that CRA, so need to stop
- Add management units to manage within. MCM cannot use the over-dredge as a use as you like activity, for operator use in units
- MCM plans to start at the eastern shore and move along the shoreline over to the cattail island area and then north from that point
- Concern about the cattails and the sloughing, 1 to 1 will get as close as can without letting sloughing occur
- Southern shore more solid land, different than western side. Get as much as contamination to the cut depth as possible, take some of sand from within working are and put it up against the cattail face to stabilize that
- Burton – Bid on conducting work as specified, may not be able to do anything with the sand according to the permit. Permit specifies that sediment cannot be moved aside without breaking water surface. Casting aside not allowed by permit.
- Rob – Anything dredged needs to be taken out and anything added needs to be sand brought it.
- May not be possible to maintain a side slope. In order to get a stable slope, may not be able to hold a 1 to 1 slope ratio.
- Burton – Not sure what will need to do but know that end result required.
- Burton – Different in each area, work with CRA to see how it will work
- Burton – Turbidity curtain out there, measuring turbidity readings , asking EC to replace with the curtain received from TC, to order again 2-3 weeks and try to get new heavier duty material.
- Burton – Turbidity curtain may not be as long lasting as the heavy duty, looks like better material
- Burton – Want more of the heavier duty material to install at the Bay area. Specification could not be met but submitted material that was equal in value. EC looking into getting heavy duty material.
- Burton – WESTON inspects the curtain twice daily and curtain will be maintained by EC
- Burton – Other issue – where material being unloaded at MCM Marine, EC has agreed to be made larger with wings
- Burton – Extra sand is EC issue, Bruce and S. Bosko working together to sample and verify components of material

- Burton – Need documentation that WESTON not responsible for sand that generated from access dredging. Surveyor come and survey pile, EC responsibility.
- MCM claim has been very vague
- Lantinga, might be helpful is we survey, have Northwood's survey pile to come up with a quantity
- Estimation was 400 cy3 for sediment removed so far by MCM for access dredging
- Lantinga – Welded in place to attempt to utilize more in the dump scow. Need to dredge 1000 to 1025 cubic yards per day.
- Burton – Norris could handle volumes, but need to keep eye on it
- Burton – Access dredging a surprise, bc MCM, WESTON asked a number of times if access dredging would be required. The no access dredging was listed a number of times
- WESTON documenting all information
- Kingfisher needs 30 inches of draft, using Kingfisher to pump water to, if needed they would need
- Burton – Concern that will not make it into the Bay, MCM has not acknowledged that current process would not work
- MCM thinking may have a problem; varying depths may be an issue. Dredge volume is not a discretionary amount to dig a deep hole if necessary
- Dredging is a low technology process,

Upcoming Activities

- 15 September in dredging, access dredging taking a lot of time, think that EC is surprised as us regarding process going on
- WESTON has been asking questions all along, letter stated that because we asked questions we knew about it
- MCM stating that it is a conceptual design, already have a dispute.
- Burton - will take several days to determine the schedule, estimated 800 cy3 per day. 50 days were allotted for, 18 hours of dredging
- 6-hours per day allotted for maintenance, weather days will be an issue also
- Water levels fluctuate, waves, winds could be an issue, Strong wind blowing on barge could move that
- Water freezing issues, cannot stop water
- Water treatment
- Turbidity curtain could be an issue with gale force winds
- EC called to complain about the denial of the change, want to send a letter to us and EC wants to stop work based on access dredging. Contractual penalties, would be actual cost of dredging based on cy3, overall delays, needs to be based on the fact that not a legitimate change
- Lantinga – P. Davidson calling it waste material. Trying to state that it is contaminated material.
- Original turbidity curtain limit
- Paying for material going into "old" dredge limits

- Dredging for weather delay would have to be extreme conditions to effect, transport, the dump scows have to back and forth from MCM marine to Bay
- Areas to maneuver would cause problems later in day. Wind would more likely effect
- Earliest ice for early November, beginning of December ice layer on bay already according to CRA
- Asking for extension now for to end of November, and see if things will improve, MCM is confident and will
- PD stated that MCM informed PD, that he had a lot of resources down south, stated all resolved even though
- Thursday morning should have sequencing, attacking shoreline first would be happy to see that the shoreline is dredged first.
- Hope that work will be conducted within close range of area

Dredging Extent

- CRA Boundaries, going over in meeting and was different than what was agreed upon, boundaries came in, agreed upon, and what came out of the call on Thursday, boundaries, were discussed in extends
- CRA not taking into account material, proposal was 4-5 million dollar, 40,000 cubic yards to total, touched based, Wes to send out email to everyone shoot for 40,000 with 3" over-dredge
- Extent of dredging matches up with contour, with regards to probing depths, put 45 degree angle there to make more accessible for the dredgers, what 40,000 cubic yards would be.
- Need to give EC/MCM dredge boundaries, and need to stay on same page with limits,
- Thought entire Bay, cut Bay dredging limits in half and miscommunication. Need to make sure that area is the same, make sure that all on the same page. Also need the communication open. All partners need to me on the same page and all partners need to be part of the decision making process.
- Conservative depths of MCM marine probes, according to CRA, really fast track throughout, and 40,000 cubic yards in front of us. 2500 captured PD in hot spot areas
- Can go back area if needed. Eastern line changed back right away. Only received map from EPA and not CRA. Friday afternoon by, issues with providing information and issues with communication in general.
- CRA to get maps together for extents of contamination and put together and distribute updated drawings ASAP
- All parties met and discussed the dredging limits to come to agreement on paper. CRA will revise figures and redistribute.

Wood Disposal Options

- Burton – Updates

- Rob – Wood looking into different options for wood, MCM using as chip material, Lumber yard chip material, Hog fuel, city might use as chip material. What would happen to costing for profitability
- Other wood options

Other Business

- Schedule other trips up to Bay for project areas. October 11,12, 13 for PD and EPA for next site visit
- Meeting on the 12th of October, same process of day. Wed, Thurs, Fri.
- Same thing for room
- Tomorrow schedule listed on agenda, officials to Bay at 1030, reps from offices
- Need sign in sheet for meeting
- CSL going to modify dredge limits and going to distribute, CRA has three figures the information includes the cut depths, Cr Concentrations, Hg Concentrations, and all include dredge limits, BH-24 and BH-9 will be hit as points, CRA will be modifying official map, CSL will be drawing a map to expedite the situation.

1430-1600 EC/MCM (Scheduled time for meeting)

Project Progress

- Burton – Behind schedule, EC state what happened and how to realize schedule
- EC – Mobilization activities went as planned, set up of pad and treatment system. Dredging startup, problems with getting barges from Cleveland, and issues with getting started, problems with manpower problems, some of MCM projects overran and individuals were held up on other activities, also had problem with access the Bay, receiving permit requirements and turbidity curtain in deeper water. Resolved curtain issue by end of week, problems with pumps and starters on project start.
- MCM – Issues manpower set up full force for last year, MCM had concerns regarding project schedule, awarded work and bid on other jobs, and in June heard that the award was given in July. MCM had 4 or 5 other project committed to and pulled equipment to get started. Other workers tied up on other jobs, MCM stated that would have tried to get work done faster. All projects have glitches, believe that problems will be worked out and once get going to go faster. Water level changed. Set up and equipment on time, ready to go and get going now.

Project Schedule

- Schedule updated last Thursday, will be updated first thing tomorrow
- Add one day onto schedule at end
- Analyzing new dredging limits and putting together overlays to determine
- EC need to take overlay of original dredge limits to what are now, look at it on an access issues to the certain areas, volume calculation was 34,000 cy3, in same ball park, probe depths are a little different , all calculations based on MCM data

- EC still dredging into bay, material on dewatering pad, dredging water treatment , load out,
- Project can still be completed by 30 October 2006, but could be an issue with weather and other factors with
- If sediment falls out like the sand is, the change outs could be reduced, additional maintenance activities will need to be helped with
- EC has Deutch industrial for shoreline restoration, will consider doing part ASAP and then coming back to finish, but could come earlier, could come back in spring to plant the live stakes

Upcoming Activities

- EC continue dredging activities into the "old" dredging limits.
- Wetland activities, will be ongoing, seeding and final restoration still needed
- Burton – See what come up with dredging sequence to see what would impact plans, looking at current water levels and finding out the process for entrance to the "new" dredging limits
- EC sequence entering the bay after new dredge limits are overlaid, continuing efficiency, by Thurs should have the plans finalized
- Access dredging to "old" limits should be done by tomorrow morning
- Access dredging to "new" limits, approx 175 ft to area,
- EC in another 100-feet should be into deeper water and should be able to float in partially
- Burton – Need to know sequencing as may affect work in smaller areas.
- Burton – Where start hitting wood estimation, pretty heavy in the west side of the area
- Burton – Cattail Island area southwest area , take into consideration going to southwest are first
- Burton – Problems to encounter
- MCM – Freezing issues in November, mechanical breakdowns could set back 3 of 4 days, replacement within 200 miles from location readily available.
- MCM could work until December; Bay will freeze by beginning of December.
- Burton – At permit limit is end of October
- Burton – Permit 40 cy3, plus 1000 yards, plus dredging in, work plans are included in permitting, will check into
- MCM moving the dredge could be an issue with the
- MCM wind shouldn't bother too much, spuds and anchors should hold in place, barges going back and forth, fog delays, freighters in front
- Burton – Sequence dredging, kingfisher will be used as planned, revisiting issues, also problems, could order portable dredge pump, evaluate cost effectiveness and using pump on, depths to sand and that would be the limit of the excavation
- Burton – Some areas may be deeper to sand than specified and some areas may be more shallow to sand
- Burton – Shoreline restoration, will there be problems,
- MCM – No problem last year and will look into it for this year
- Rob – When water fluctuation

- MCM – Water fluctuates with the wind
- Rob – Could MCM take advantage of high water levels and take some off top and then when water levels
- MCM – Have not done that before, need 30 " of draft for kingfisher
- Burton – How are we moving in Bay?
- MCM – Once inside will use excavator to pull barge ahead, kingfisher will provide spuds and pumping capacities
- MCM plan to keep Kingfisher stationary and then barge will be moved
- MCM will be close to be in bay area and then could be shooting into bay area
- MCM play schedule by ear for change out
- PD – Meeting at 1130 at platform
- MCM – Adding up cubic yardage at end with survey and should be able to quantified depths and cubic yardage removal.
- EC – Should be able to take different areas, EC would conduct a post survey before the need to over-dredge for beyond excavation limits to access different areas of the bay
- Burton – Sampling showing that it is clean, need to make sure that sand is segregated to make sure it is clean before removed from the site. Keep as much black stuff out of the area, black sand could also have some, should be inert material. Need to have interests protected, make sure material is clean before removing it from the site and analytical results completed.
- EC will get sequencing to WESTON ASAP.

Full Meeting adjourned at 1640

Weekly Status Meeting
17 October 2006

Schedule for 1330 to 1630

In Attendance:

Mark Tuchman (US EPA)
Dan Johnson (Phelps-Dodge)
Lou
Rayna
Hajit
Jessica
Robert Bressan (CRA)
Jim Burton (WESTON)
Chris Lantinga (WESTON)
Annette Dickinson (WESTON)

Regular Weekly Meeting (1330-1500)
(Actual Start Time 1340)

-Follow-up questions related to morning tours

- EC/MCM will be here later to present schedule and proposal for retooling
- EC/MCM may have more thoughts different from the meeting, MCM knows that they will be expected to retool and reevaluate the process
- EC/MCM are concerned about liquidated damages, if the project is not finished till sometime in the spring
- Can also follow-up with MCM/EC later regarding any additional questions about the work
- Dan – How much sawdust going to use?
- Reply – May have to keep using the sawdust throughout the process, WESTON will deduct the mixtures from total tonnage, WESTON is tracking the total tonnage for the sawdust
- MCM/EC has given options of sawdust, CKD and lime for use as add mixtures
- WESTON stated that there are no line items in the contract to pay for add mixtures of any sort
- Mark recommends walking through process and point out issues and what has been done for the issues
- WESTON stated that MCM/EC would be going through all of that
- WESTON stated that pad is still pretty wet and MCM might be mixing the sawdust at about 20% instead of the 5% previously thought
- CSL spoke to EC/MCM and are claiming that only using 5%, and it still appears that MCM is using a larger amount for mixing
- Bruce asked if could subtract out weight, WESTON knows how much is brought, but more than the original weight going into landfill due to the water in the sawdust
- 50% solids required by landfill or pass a paint filter test, will look into if it makes a difference without the add mixture and do a daily moisture content
- Mark inquired when switching over to lime, if that would be necessary

Weekly Status Meeting
17 October 2006

- CSL stated that have not brought lime on site as EC stated they would
- WESTON stated that original loading was done without sawdust, and material was staged on pad longer, sandy material also dewaters faster
- EC/MCM anticipated that it would be 50% sand and it has not been happening so far
- WESTON stated that better pad operations would help with dewatering, MC is wasting sawdust by mixing it with wet material, too early in the dewatering process
- EC/MCM stated that should be paid for disposal of sawdust, not billing for add mixture itself, WESTON believes that MCM should not be paid for the disposal of the sawdust
- Add mixtures were included as a contingency, but was not added into the price
- WESTON asked for a contingency for dewatering, the add mixtures are not included on the weight
- WESTON stated that EC/MCM would have to send a notice of change, EPA would like to inquire about future uses of add mixtures

-Progress made to date

- WESTON has been sending out daily bulletins
- WESTON stated 333 cy and 300+ cy for the previous day
- WESTON explains the figure for presentation
- MCM today was encouraged by their production and could be done in six to seven days, MCM has concerns about draft on the area at the shoreline
- November 3rd seems like a good date, MCM cannot tell us they want to keep going
- How close are going to be able to get to the shore?
- The pilings want to keep in because they go down deep and should help with stabilization, MCM can go right to the pilings
- MCM may have to cut deeper than necessary to get deep enough for the draft
- If MCM has to go deeper they would pay for it, and not sure if we want to leave a 3-foot cut depth
- Rob, when put the shoreline the rock wall was put in using an excavator from the shore side, could get equipment in there when the tide is low
- Maybe toss material or push material out further using an excavator
- Rob do we think there are permit issues with the use of an excavator or dozer on the landside of operations
- As long as don't tear up shore line when doing the work, it should be fine to go from the landside
- MCM has to start thinking about the shoreline and see what they think
- MCM only seems to be thinking about things linearly
- Maybe MCM has thought about retooling, wanted to get into more of the wood and see what will face with a larger volume of wood
- Bruce would there be a way to tell where time is
- Can give MCM suggestions but cannot tell them what means and methods to use

- Could dozer the cattails also, WESTON has suggested using a marsh buggy to push material to an area where can reach, MCM has considered it
- WESTON MCM should listen to all suggestions because of retooling, have the right to say if do not think it would work
- If the pilings are not needed for stabilization then, could use the dozer to cut off top of pilings
- Rob wants to suggest cutting another access dredging path in from the Northwest, could use a hopper and move material back and forth, minimize amount of trips,
- A suggestion was also made to use a conveyor. It was also mentioned that a lot of dredging would have to be done if MCM wanted to come in from the Northwest, the area in the Northwest is very shallow. The wood separation would also be a problem if using only one scow. Big pieces could be pulled out of the water separately and it could increase efficiency. EPA could find out what was used at Rudeman Creek. As a side note too much wood could also beach the scow. MCM already looked into access dredging from the Northwest and a much larger amount of material would have to be removed.
- It was thought that if MCM only used a hopper and also used that piece of equipment for transport, would be causing a lot more of water to go down stream to the treatment system. Would like to leave contract and pay items the same on the project
- Can bring up ideas to MCM and see if they come up with different ideas, or if there are any comments on the ideas the group is suggesting
- Could use both methods but in different areas of bay, Rob worked out a calculation for straight mechanical dredging
- Need to retool to make sure that, 720 cy could be reached
- With mechanical only method would still need to rehandle wood and see what would be most cost effective
- Have to offload at MCM, if there was grizzly operation, could still use to separate out wood
- Cost of the salvaged wood, saves the cost of about a third of T&D
- $300,000 would be saved if the wood didn't go to landfill
- Try to use the wood as a trading option, separate wood and then give more days as a trade off, that could be a suggestion but not going to discuss that now
- Will still need to get extension for permit into the Spring of 2007
- Request for an extension into Dec 2006, fish and wildlife called to ask some questions about the Bay, there has not been official approval but it appears to be ok
- Fish and wildlife should not be an issue, so MCM could go as long as we allow them to if needed
- EC/MCM are going to submit a revised schedule
- Area was chosen to get through 2 EUs and also gives MCM the opportunity to experience the wood
- Phelps-Dodge would like to get approval in writing from permitting to make sure that is allowable within the permit to push the clean sand up onto the slope,

nervous regarding pushing sand and want to make sure that protecting the side slope

- WESTON will contact Ed Arthur and Mike Selenski regarding the sand used for slope protection and the extension of the permit
- Is a variance required for dredging in the spring? Will have to inquire with permitters regarding that.
- CRA is going to wait to sample until all work is done to collect samples and samples will be collected when the final survey is completed, that way the sample locations can be surveyed in
- Disposal permit may need to be extended, need to work with POTW to update the agreement for the spring
- Contract amendment will have to be updated also

-Winter 2006/2007 activities

- EC/MCM submitted changes and WESTON denied those changes regarding the access dredging and turbidity curtain
- WESTON wanted the revised plan in the middle of November, would like to review the plan before signing the contract amendments and make sure that the method is going to work and appears to be feasible
- EC/MCM stated could get a revised plan to WESTON by the end of November
- A lot of activities over the next few months and want things to be squared away before start in the spring

-Wood disposal options

- Not Discussed

-Other business

- See action items

Action Items:

- WESTON will look into contract requirements
- WESTON will prepare revised permits if necessary
- WESTON look into using the native material to stabilize the slope for the winter, get Ed Arthur approval in writing, seems he may require slope stabilization over the winter no matter what
- WESTON will find out about Oct 31 extension
- WESTON will look into variance or any additional requirements that could be imposed if work was to proceed in the spring
- WESTON will distribute EC work plan to group and will have the group review at the same time, to get comments to EC in a timely manner
- WESTON will talk with EC regarding schedule
- WESTON will go over deficiencies with EC and make sure that things are implemented
- Going over water levels and then other change order issues

Weekly Status Meeting
17 October 2006

QAPP

- Rob QAPP group going to take with them and scan around sign off page, Rob will get copies of draft QAPP to US EPA and WESTON
- No call this Thursday
- Continue weekly meetings until Dredging done
- Call regarding plan (Maybe between thanksgiving and Christmas)
- Call in early spring to talk about progress
- Dan would like MCM to think about removing cattails in the winter before the spring
- Could shear off cattails and shred the sheared material, could get the roots and load into dump scow for storage until the spring
- If MCM can get all of the tops of the Cattails then would just have to deal with the root material in the spring
- During the mobilization would also be an opportunity to trim down the cattails again. If the root material is covered with a black tarp, that should help to inhibit growth.

Meeting adjourned at 1520

Meeting with EC/MCM (1500-1630)
(Actual start time 1509)

-Project Status/Schedule

- Pat stated that since the last meeting access dredging had been completed and MCM reached the revised dredge limits by Sept 24th and were then shut down for a couple days due to turbidity curtain repairs, dredging within the revised dredge limits started on 28th, began in DMU-1 and moved into DMU-2
- Worked from East to West into DMU-3, went a little past the half ways point and moved back to DMU-1 to proceed south into DMU-6
- 13 scow changes a number of those were from the access dredging, 7-8 with the revised limits
- Loaded 177 trucks of clean sand which is approximately 2,300 cy
- At least 2,200 cy trucked of the contaminated material, ~94% sediment some wood, early on just rain water on pad
- Treated approximately ½ Million gallons of water from the drainage pad and from the dump scows
- MCM is currently in DMU-6 and moving to the south
- On track for what is planned right now
- Get into path forward and go through interim milestone completion
- Retooling effort over the winter, come back in the spring

-Going thorough process step by step

- The process starts using a clam shell with 1.5 cy capacity, pick out wood and sediments at the same time pick out as much wood as possible, cycle times have increased significantly, feel that can reach the 800 cy per day with this method
    - Maybe conduct a separate operation to pick out wood ahead of time, draft is an issue, wood is prevalent throughout the depth of the sediment, EC believes the process works, decent production
    - Would like to increase production capacity
    - Would like to increase time operational
    - Clam shell is the correct piece of equipment available, waiting on grizzly screen to clear is one of the major hold ups
    - EC needs to evaluate removal of sediments on shoreline
    - What draft is required for the removal of sediment on the shore line
- Sediment is then placed on the grizzly
    - Wood is washed if possible, but is directly placed to the debris scow if necessary
    - Grizzly has been the main hindrance to the project, % up time and percent available
    - Grizzly will be retooled for better capacity to solve problems
    - A lot of down time from the grizzly
    - Spray bar operation has been retooled a couple times and now is working better than before
    - The Grizzly will be reevaluated and the productivity looked into to
    - Debris is handled and move to debris scow and trying to move choke points
    - MCM would like to increase the area of the grizzly and keep the holes the same size
    - Give more area of the screen, the screen larger could help the water and the mud go through faster
    - Cattails will most likely cause a lot of problems
    - MDEQ issued a notice against leaf notice and burning the cattails may not a good idea, doing prescribed burns in prairies, but may look bad coming off of a superfund site
    - In the spring, MDEQ agrees that burning could be a good option, if regulated controlled burn
    - Bucket size for wood could be an issue, the sediment usually stays in the bucket, most of the mud would stay in the bucket, but some comes out
    - If the wood can be put directly on the debris scow
    - See if wood could be a problem, EC going through everything
    - Make sure to evaluate methods and see what can be done, need to keep the productivity up
    - EC would like to keep going with the equipment at hand, want to have a good completion point to make sure that cross contamination will not be an issue
    - Dredging to shoreline would need to be done now
    - Dan suggested cutting cattails down in the winter and cut down to ice surface and then would get then out of there

  - WESTON stated that may need to check the permit allowances and see we need to make any changes for the
  - Need to have back up plans incase current plan does not work
- Material then falls into Slurry Box
  - EC going to go through the time for that process and make sure not losing any production
  - By changing the screen to make sure the material is not blocking the screen
  - Want to make sure the knife operation is needed
  - Want to make the goal 150% of what really needs to be done for completion
- Slurry is pumped to the dump scows
  - Adding polymer to help with the dewatering in the dump scow at the bay
  - The supernatant is clearer and easier to pump off for recycling and dewatering at pad
  - Averaging about one dump scow change out per day
  - Recycling water from water barge to slurry box
  - Water cycle does not seem to be an issue
  - Water is still 48 to 50 degrees, icing has not been an issue yet
- Off loading
  - Need to make sure there is not material going into the water from the off-loading barge
  - Can reevaluate to make sure that there is not runoff
- Water Treatment
  - Analytical results are good
  - May need to create a cover for the treatment system for November
  - Could also put in a closed loop system, and make sure winterizing the pumps and hoses at night, large amount of water in the system should be okay
  - Water treatment seems to be working well
- Pad Layout
  - See if can move water treatment system to get more room on the pad
  - Right now using sawdust to mix with sediment
  - Running at about 5%, and MCM used more material today in the wetter material and not a usual occurrence
  - Looked like a large amount today, but not a regular occurrence
  - Sump needs to be mucked out, there is ponded water and it is going into the sump at a full time basis, last thing we want is the water ponding and need to minimize the solids that are introduced
  - Pad will be reevaluated also
  - It was suggested to use a filter up front to help with the drainage
  - Rain is adding water to the pad, have done some water diversions using the sand bags to keep run-off from the driveway
  - EC has a list of things they are going to reevaluate and not all things will be changed, but an evaluation will be made

Weekly Status Meeting
17 October 2006

-Evaluation of Process/Retooling Efforts

- Dredge bucket as it relates to cycle time and as it relates to wood management, be able to remove sediments at the shoreline itself
    - Sediment at shoreline and maybe put a small dozer in there and push material out was suggested by CRA
    - MCM could take excavator off and crane mat along the excavation and move the barge along as go and then use clam shell on the landside still putting the material into the grizzly
    - A lot of cobbles and want to make sure that the rip rap is not effected by the process
- Increasing production capacity of wash bars
- Increase availability of grizzly
- Look at size of grizzly screen
- Look into more contingencies, such as back parts to minimize down time
- New schedule that will be proposing is a prescribed maintenance schedule, 7 day per week, and 1 day of scheduled maintenance
- EC looking at all reasons for down time of equipment
- Only operating at 35% of projected productivity
- Pool resources to multi task operations
- Debris handling management, be most efficient as possible
- Attempt to identify other ways to separate out debris, can minimize large amounts of material through screening
- Draft of the barges
    - MCM could look for some larger barges, Flexi Float barges would give extra inches of draft
    - EC will look at utilizing different sizes of equipment
- Shoreline sediment removal
    - Whether need to look at different approach
    - Has EC considered shoreline sloughing, Dan is also concerned about the current rock wall and stabilization
    - Dan does not want the excavation to get to close to the piers
    - Rob should be able to get close to the rip rap, right up to it, CRA will be on-Site during the shoreline area to make sure no damage is retained
    - Snap off piers as necessary and will have berm
    - Rob speaking about the dozer could push things out and push things back to grade, could snap piers off
- Turbidity curtain
    - Installed properly, where it is installed
    - Come up with a plan that will minimize for maintenance
    - See what can be done during gale force winds
    - Minimize down time that would be experienced by effects to curtain
    - EC feels have the correct material for the application, reps may be able to help out a little more
- Evaluation pad layout to reduce drying times
    - Optimize polymer usages
    - Optimize off-loading

    - Optimize use of drying agents
- Less maintenance for the curtain, and for the grizzly
- The production will vary per day and the 800 cy per day as an average for the area
- May have to leave some material for the spring
- The plan for hitting the shoreline is in the spring
- Jim posed the question if had to cut in
- MCM stated may have to dig area out again unless the water drops a half a foot
- Jim will double whatever think will double the amount, you can put things in and not do them, but it is harder to add

-Proposed Re-Start Schedule

- Done with Dredge scenario three and end of October
- Demob for 2006 work
- EC will have a mob demob plan
    - Empty all the scows with material
    - Pump off water barge
    - MCM will check with Riess if can leave a barge there over the winter and transport cattails
    - Barges emptied and stored and tugs will be left here
    - Need to return Felxi Floats
    - All equipment broken down
    - 10-inch pipe stays on side
    - All sediments will be transported off-site
    - All water from the treatment system will be removed
    - Carbon will stay on-Site and will be vacuumed off-site
    - Modu tanks would have to be either broken down or stay
    - Office trailers will be demob then remob
    - Power will be temporary shut down and then started back up in the spring
    - Relocated concrete blocks and put back in the spring
    - Store boats on pad in
    - Demob activities should be done by November
- Beginning of November for technical review
    - Toward end of month have a plan after goes through channels
- Start retooling efforts mid-December up until the end of March
    - Work closely with Joe and do milestone reports
    - Make sure on track with preparations
- End of March begin remob
- All of April gear up and prepare for water operations
- Begin dredging May 1
- May 1-to 800 cy as basis for schedule for 6 days per weeks, 7th day for maintenance or production
- Could have as much as 32,000 left, to give new completion date
- Look to wrap up restoration activities at the same time
- Same schedule for demob and operations
- Total objective is to meet and exceed production rate

Weekly Status Meeting
17 October 2006

- Tentative date for end of dredging June 22nd and final inspection June 23rd, demob on June 28th, project closeout paper work July17th
- Any thought to the dredge path
- MCM thinks they would go back to the original dredge path
- Would like restoration to as soon as possible
- Need to get plans in as soon as possible to make sure it
- Need some kind of reasonable consideration for
- Survey is being done continuously and survey full survey will be compiled when done with area
- Did the samples and will continue sampling and will go into area after completed
- There is a second debris scow that is getting to get the bay maybe today or earlier
- Debris scow with shallow draft will be looked into
- Jim talked about mechanical dredging,
- Reason for the dredging for mechanical only and draft is just not there, would not work
- MCM has done a job like that before, only averaged 15 to 20 cy per hour
- 300 cy barge would need a six foot of draft, would need a 10 foot access channel
- WESTON will talk to permiter's and find out what needs to be done to
- Will have to coordinate and make sure that all permitting requirements are covered
- Sheet piling did not think it would be a good method, with the dewatering would not be effective, too much effort to dewater the area
- NPDES permitting would also be an issue if using the sheet piling method
- Shallow depths will be an issue, EC is confident that can do this method even with the issues
- EC has sense of urgency, Phelps-Dodge is concerned about health and safety in the impeding winter months
- Bruce could see what would happen with the cattails if could get a burning permits
- Phelps-Dodge would prefer not to burn, due to a plume that could come off the Bay

1635 EC/MCM meeting adjourned

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
20 June 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday June 29, 2007.

Weekly Progress Meeting

20 June 2007

US EPA
Phelps Dodge
Weston Solutions, Inc.
CRA

Jim Burton Summary

- Currently 14 days behind schedule
- End Date is 22 August 2007
- EC realized schedule behind
- Need to reach 670 CY per day to reach end date of 14 August 2007
- Right now EC at about 400 CY per day average
- Norris took 44 trucks of Material ~4400 CY
- Survey seems consistent in comparison
- Northwoods had a higher estimate removed
- Surveys were comparable, but they seemed to be consistent
- If the total is 8900 from last year, so might be a little bit less than we think from last year
- Mark – Material that are dredging now is not in the plan, when do a post dredging, post dredge of that area, will do an entire survey
- Now EC saying that need to dredging to 596 ft
- Need to make sure that are only being charged for elevations
- Contingency to load the shuttle barges lighter and not digging more
- Want EC to be able to address questions, and see what the response is
- EC has already gone way over the allotted amount
- Agreement was for 6,631 CY
- EC/MCM went deep and has taken longer
- EC has been coming to different numbers than Chris
- WESTON is trying not to address
- EC is still waiting to receive the dredging sequence from MCM
- CSL talking about dredging sequence and then going over the way that are going to enter the edge
- Robert may be going to dredging really deep and then going to try to go deep
- The dredge barge is lower and then the flexi floats

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
20 June 2007

- Have to make sure that anything that is done and then all is done under the existing permit
- EC is hopefully going to go back up to DMU-3
- The Zodiac can come in closer, but may look into extending dock out into water
- The numbers that WESTON is using are liberal and MCM numbers are lower
- There are three scows, but only two shuttles, the operations are slowing slightly from change outs

At 1355 MCM and EC meeting has started, MCM/EC in attendance
EC
MCM
Additionally in attendance

Jeff Wolmeth

- Slower start than necessary, weather was a problem on one day, stating that there was a delay due to low water
- Biggest delay due to low water
- Shuttle barges, but only loading about 40 to 50 CY, and need to load about 80 CY, load more
- Resulting in more shuttle changes than were if there was deeper water
- Possible adding flexi-floats for floatation and also looking into bringing in additional equipment and there are 4 scows
- Large bucket, and see what can be done with a larger clam shell and that there could be an increased efficiency, and there would be able to help possibly
- Great Lakes, has 2.5 CY can go into 2.4 ft water, with larger bucket, that would help with operation
- EC does not have any time frame right now, all parties are in agreement and EC/MCM trying to work out something
- Water levels are around our stilling well are higher than the NOAA levels
- Can only load the shuttles lighter than last year, getting the shuttles in and out and not loading the water
- Water level was the there last year
- Two operations would wipe out any kinds of lines crossing
- Seems like the operation is safely
- Rocks are a big safety hazard and
- Reach out and getting area by the dock to build it out for a small channel
- EC number to date for access dredging in approximately
- Skip showing area for dredging on the map
- Skip also stating that would use the unit and then a long reach excavator
- The dredge lanes are approximately 20 feet narrower than
- The larger pad seems to be accom, the volume better

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
20 June 2007

- Trying to stack the material to help with dewatering before leaving
- 1,100 CY per day with daily, there was opened landfill last year on Saturdays sometimes
- Material is harder and tighter closer to shore
- Deutch, was not sure if they would be able to full fill the contract
- Trying to find the material that they are going to use, they might not have a supplier to and there might not be the supplier and might need to have someone on board, see if there is any alternative that is available and see if there is a supplier they can find with the correct material
- The actual material would be different
- Need to find out regarding the areas
- 2 CY material handling bucket
- Silt curtains are important and need to be installed properly
- Turbidity curtain has been repaired several times already
- Try to have any submittals necessary
- Set up a meeting to make sure all is clear about what is needed to be done
- Deutch take on it was to make sure that all needs to go in a certain place
- Staging area needs to be undamaging to wetlands for set up
- Need to make sure that staging area is left as found
- Heavier socks would be dropped off barge and then the smaller socks could be put in later
- Need to have conversations with EC about dredging to dock to make sure that rock wall is not damaged

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
11 July 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday July 19, 2007.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

07.11.07
13:00

Jim Burton (Weston):

- With White Lakes dredging MCM should be able to get done by 8 August, no other large delays
- Should be able to meet schedule
- Water levels should be fine up to the end of project, then it will start to drop off
- Water rises to end of July for the projection
- Water is not an issue
- Approximately at about dredging at 50%, certain inefficiencies that were identified
- Could add another shuttle to increase efficiency, and then getting additional firm
- The pad could be more of a hold up
- Material could be wetter and then and could get backed up on pad
- EC bringing in another firm to help get it done
- Tell EC up front if dewatering is not dewatering fast enough
- Landfill is charging by the ton
- WESTON paying EC by the cubic yard
- 1.8 for sand and 1.2 sediment, and going to get back today hopefully the first results
- EC should receive payment for the first invoice
- Norris also invoiced up to 6.30
- EC is aware of deductions
- Chris went over the invoice with Skip
- Overall budget, 3.9 million left and about 330,000 dollars since 6.30
- Very little wiggle room with budget
- No discussion regarding change orders so far
- Norris might be able to handle extra tonnage
- Could EC possibly segregate the material

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
11 July 2007

- % Solids and density could be another point
- Additional dredge operation will be used and may mention to Ed Arthur
- Norris will most likely submit a change order for fuel which was covered under 40,000

Robert Bressan

- Possibly send FYI to Ed Arthur
- Highest Hg in 0.2 mg/kg
- All mercury results had a J qualifier, for below reporting limit qualifier
- Robert going over the shoreline restoration
- Concern from Deutch is that the geotextile and the roots will not grow in a natural mass and there is some legitimacy to the claim
- Seeded compost blanket that is planned to go on-top, biodegradable blanket for the shoreline stabilization
- Bottom have the gravel in them and the material starts as a seeded sock and provides a seeded embankment
- Live staking that is required would be
- Discussion with Doestch regarding replacing a biodegradable blanket
- Going to look into detail and get back to the group
- The blanket would have to be installed and then
- Attempt to cut back a little bit more to create a slope at the shoreline
- Do not leave a vertical slope
- Cut from the cattails and set the cattails as the top of the slope and then the bottom of slope will be later
- Rob will speak with Deutch regarding the biodegradable blankets and see as long as the material will not cost more
- It will be better option and will have discussion later and will discuss further after the end of the meeting with EC/MCM

EC/MCM join meeting

- Introductions
- Follow up question from the morning walk through
- What about dewatering process and
- Very fine sediment right now and not giving up water easily
- The material is varying, but the finer sediment holds the water and going to need to continue adding the sawdust
- Might run into more peaty material again southern toward the beach
- EC expecting to get higher yield of silty material approaching the beach
- The material for the dredging access and then
- The fine material is binding to water by capillarity
- Evaporative drying would be our only other option

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
11 July 2007

- Adding sawdust as necessary and will get better with the next shuttle, material is a lot drying
- No change to the permit, but an addendum with the added dredge
- Completed about 11,000 CY per day and dredging rates
- Skips expectation is that the pace will continue at the same average rate
- Approximately 700 CY per day and will continue through project end at an average
- White Lakes will be used for the shallow portions from the shoreline
- Production guess for White Lakes is 300-400 CY per day and only running one shift – 12 hours
- Dredge an access lane parallel to the shore
- Access dredge as far as needed to get the shoreline areas and then reach as far as can
- White Lakes will need 30" and will be using the same shuttle barges as used by MCM
- White Lakes were hung up at the Mackinac Bridge and White Lakes should be in the water July 18th
- Shooting for a dredging rate of 1100 CY per day average
- How quickly can the material leave the pad and will be the bottle neck
- The silty material will not dewater in the scow
- Using geotubes the progress would go backward instead of forward
- Cement kiln dust was a lot higher than the sawdust and not saving anything from that, just binding water
- Extra material is causing problems
- Three days storage
- Weather is causing problems
- Managing the dryness is not a possible feat
- Stack the material as much as possible and add sawdust as necessary
- The material in the bay is varying
- 2.5 CY bucket on long-stick and should be able to use it for the wood and all
- Schedule about finishing dredging around the second week of August 9th or so
- Projection for water levels shows that the water levels will increase until August and then level off in August
- Meet about shoreline later
- Biodegradable blanket and see if that can replace the geotextile
- Tier socks depending on cut depth
- Deutch work could happen when dredging would be finished and really will hinge upon White Lakes progress along the shoreline
- Reverse flow a vacuum truck and fill the socks that way, rock socks versus the material socks
- Cut how will the northern area be laid out

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
11 July 2007

- Maximizing the loading time and dump time
- Samples in dredging sequence one and two

EC/MCM meeting portion adjourned @ 1448.

CRA/EPA/WESTON/PD/DEQ

- Need to get geotech data back and make sure that all good
- Need to stay away from the beaver dam and keep established
- Date for next meeting in Sault Ste Marie, MI would be 31 July 2007 tentatively

Meeting adjourned @ 1500.

Meeting adjourned @ 14:50

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
31 July 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday August 9, 2007.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

07.31.07

Jim Burton (Weston):

- Progress to date, at about 30,600 CY about 77%
- MCM ranging from 473 to 550 CY and White Lake ranging from 270 to 308 CY
- White Lake works 12 hour shift and MCM 24 hours
- 786 to 858 CY together
- South area about 5400 CY
- North area about 9600 CY
- Balance to get to 40,000
- Schedule is about 18-days to finish, August 18th at 800 CY per day
- August 14th is scheduled end date
- Going to be a week past the 14th deadline
- Skip is aware of bottle neck at 56 and working on
- Weather and water okay
- Issues are bottle neck and the boulders
- Shoreline work and sand
- Slopes are worked out
- Doetsch has indicated that the sand might be a problem with growth
- EC stated that the sand would be placed
- If sand is necessary then will add it and then sand will be added
- Doetsch is okay with the 2:1 slope
- CRA thinks that the sand should be placed in the sand on the slope
- There are levels of Hg and Cr in the wetland and see the slope left
- Geotextile is planned to be replaced with a coconut based biodegradable matting for restoration
- CRA – roots can grow in the organic fills
- Sand would be coming from the floor
- Wait to see if there is a benefit for the additional cost

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
31 July 2007

- The coconut matting would add as a cover until the sprouting the occurred
- Sampling will be waiting until areas are clear
- Sampling and will try to finish and end the EU-4, EU-5 and EU-6
- Planning on sampling Tuesday next week
- Planning on matching survey with 25 foot grid

MCM and EC for Meeting (14:01)

- Skip starting
    - Chris has informed of cumulative totals
    - Long reach excavator
    - MCM has moved into north area White Lakes working in southern area
    - White Lakes is finishing up cut 3 and Cut 4
    - The dredge pack has been dredging and are short of the schedule
    - And finishing dredging the 18th at last weeks rate
    - Mechanical issues last week, are repairing crane right now
    - If there are cobbles in the north it could slow out
    - The estimate of 800 CY per day is using material and assuming the same material
    - There was a causeway in the bay based on a 1913 map
    - White Lakes might be finishing 3 and 4 and then moving to the south
    - Have to overdredge to get to area and running the machine off of the
    - Permit issue is with picking up material and dropping and it would not be with running the machines on the sand in the bay
    - Capability of dredging at a higher rate and maybe pass shuttles in the channel
    - Concern is about doing 800 CY and making the bottle neck try to limit it
    - Discussion regarding placing lima out there and
    - Concern with the Lima, it has a big bucket and a small operator error
    - Would be a large amount of work to change out to Lima and could take too many days
    - Should be able to see minimal back ups over the next few days
    - 22nd substantial completion days
    - Doetsch cannot overlap too much, Doetsch need to start in the most further western point
    - Could do a small eastern point and start with that
    - Doetsch will need to start for the western portion at the most northwestern point
    - A week for shoreline restoration
    - Complacency in the crew is a concern of Skips
    - Attempt to fine tune the off-loading
    - And White Lakes will be here till the end
    - Try to do the surveys at the same time and that way all quantities for the survey will be completed at the same time

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
31 July 2007

- Need to get the permit approval for the coconut matting
- Doetsch a lot more comfortable with the matting

End meeting with MCM and EC 14:25

- Safety is a concern
- Boulders and sawdust
- WESTON is concerned about the changes orders that might come up
- Project is not going at the end of August
- Last meeting on August 22nd same schedule

Meeting Adjourned @ 1445

Meeting adjourned @ 15:00

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
22 August 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday August 30, 2007.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

08.22.07

Jim Burton (Weston):

- Printed out the water
- Mark would like to discuss the overdredging volume
- Most likely underestimated for the dredging
- Access dredging volume was not included in the total dredge volume
- Overdredging in the bay will be calculated using the final survey
- Final invoice will include the deduct for the sawdust and for additional water going to the landfill
- Dredging and dewatering are by quatity and others are lump sum
- Should be ready to meet with EC next week
- EC has had no comments to date
- Only reason EPA should be involved is if EC has valid claims
- Final tonnages for Norris contract, may be a bit more
- EPA would like to go over information before WESTON speaks to EC
- Norris may want a change order and that was allotted for in original budget
- Substantial completion was supposed to be today
- EC can begin demob of some activities
- Number in DPB includes over dredging and does not include access dredging
- WESTON has given Northwoods the same points
- Survey volumes at 38,900 CY assuming cut all the way up to the edges
- Some of the areas were reduced and waiting for survey
- Additional over dredging there is not money for over 46,600
- Trying to be fair with the survey
- Maybe northwoods can add additional points for the survey
- MCM pad dewatering still, demobing in the bay, site demobing should be next week
- Last of the sediment samples will be collected today

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
22 August 2007

- By Friday should have all the results and them the exterior turbidity curtain
- Latest we can deal with an issue if necessary, call at 10:30 eastern time for meeting about samples
- Project completion event see what to do with 20th of September to make sure okay
- Try to nail it down today before
- Can leave the viewing platform there for now, make a decision to take it down later if necessary
- PD still waiting on the final for the rest of the project
- Talk about going to BPAC meeting and see if going set up meeting
- Try to have it all done in one trip
- Update the signs and have it be a past tense project
- There will not be any activity and it will be finished for the meeting
- Make sure that EC does not take down viewing platform, but remove the walkway

Meeting with EC/Doetsch

- Update for schedule from EC
- Last bucket taken out last night
- Few hard stakes and some live stakes to be put in
- Restoring working area
- Live staking and hard staking will be completing
- Already some growth on the early germination seeds
- In about a year it should be evident the growth for feel for restoration
- Nativescape, worked to pick out plants for local growth
- Doetsch will be done today (8.22.07)
- Native to the specific area, not just the state
- Demobing and deconning shuttles on bay
- Biggest thing would be getting material off pad and dewatering of sediment
- Shuttles are deconned will work on dump scow that is on the dock
- Waiting on timing to bring the water barge down
- White Lakes is ready to get going
- After shuttles, scows, and water barge are deconned and then can start deconning the pad
- The water treatment will be the last thing to be demobbed
- Hoping to have all complete the week after labor day
- Completing the survey today
- MCM will complete the survey today and will survey any missed areas and the hot spot
- Finish sampling today and results back Friday morning
- Take out steps, but leave in viewing platform
- Bring trailer for sampling back to yard on Friday
- The last bucket was removed at 19:45 on 8.21.07

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
22 August 2007

- NW survey going on this week and hopefully will be done within 3-4 days

Meeting adjourned @ 11:00

MEETING MINUTES: Tannery Bay Legacy Act Remediation Project - Conference Call
Thursday, August 17, 2006, 1:00pm-2:30pm CST
(Action Items in Bold Blue Lettering)

Attendees:

- Michigan DEQ – Bruce Van Otteren
- Phelps Dodge Corporation – Jim Telle
- Weston- Jim Burton, Steve Bosko, Chris Lantinga
- Conestoga Rovers & Associates- Robert Bressan
- USEPA-GLNPO – Marc Tuchman, Ajit Vaidya
- USEPA-Region 5 – Norvelle Merrill

1. **Mobilization Update**
   Jim Burton gave an update on the mobilization activities and schedule, as follows:
   - This week: Pad construction almost complete, pre-dredge survey activities.
   - Next Week: Silt curtain installation, Installation of onsite wastewater treatment plant, Assembly of dredge barges and equipment, initiate wetland hotspot excavation, review of survey data.
   - Dredging work scheduled to begin on Sunday, August 27th.
   - Weston (Chris Latinga) has been overseeing the mobilization activities. **Weston will send pictures showing the progress of mobilization work.**

2. **Pre-dredge Survey**
   Envirocon/MCM is performing the pre-dredge survey under Weston's oversight. Work started on Tuesday and will finish by Friday the 18th. The Envirocon survey is on a 25ft grid to top of sediment/wood surface. They are also doing 100ft grid probings to define dredge depths to the bottom of sediment/wood. Northwoods under CRA's oversight will be doing its own survey on a 100ft grid on Friday, Aug. 18. **Survey data will be reviewed by Weston and CRA next week.**

3. **Wood Sampling**
   Wood core samples were collected earlier this week. The observations from the sampling suggest that the fine sediments wash off the wood fairly easily. Also, it appears that the wood tends to float after being cleaned. As such, it does not appear that the wood can be used effectively for sideslope stabilization, and the wood will likely need to be placed in an upland location. Robert Bressan indicated that there is a local company in SSM, ON, which may have a use for the wood to fire their boiler. The BTU and moisture content needs to be measured to determine if this is a viable option. **Robert will continue to check on this.** The wood core lab results are expected by Monday. **Robert will summarize the data and send out the summary next Tuesday.**

4. **Project Sign**
   Public Affairs has reviewed the draft of the project sign. Several minor modifications were discussed. **Weston will make sure that the changes are incorporated into the sign.**

5. **Viewing Platform**
   CRA is working on an educational display on the dredging project for the viewing platform, which will overlook the Tannery Bay dredging project. **CRA will coordinate with Susan Boehme to get feedback on the display before it's finalized.**

MEETING MINUTES: Tannery Bay Legacy Act Remediation Project - Conference Call
Thursday, August 17, 2006, 1:00pm-2:30pm CST
(Action Items in Bold Blue Lettering)

6. **Joint Permit Modification**
   Rob Bressan will call Ed Arthur (Corps) and Mike Smolenski (MDEQ) to get verbal approval to proceed with construction of the viewing platform. Once the specific plan for placement of the sand cover is complete, the plan will be sent to the Corps and MDEQ for approval. Also, Weston gave a 5-day notice to MDEQ and the Corps to notify them of the impending start of dredging activities.

7. **Sept. 19-20 Site Meeting**
   A technical site meeting will be held on Tuesday, Sept. 19th. Wednesday, Sept. 20 will be an opportunity for elected officials, local dignitaries, and local media to view the project progress. **EPA Public Affairs will coordinate the media / press activities for this event.**

8. **QA/QC**
   The final sampling plan and QAPP should be finalized by the time of the conference call next Thursday, at which time it will be ready for routing for signature.

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
23 August 2006

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday August 31, 2006.

US EPA
Phelps Dodge
Weston
CRA

Jim Burton Provides update:
-silt curtain
-wetlands survey complete
-access load tomorrow
-clearing area
-access road walk
-sump is plugging
-jersey barriers
-barges arrived on Aug 19th
-Barge inspection tomorrow
-Water treatment system in place
-Schedule slipped
-Access road completion
-Barge assembly next week
-new start Sept 5th
-End date has not changed
-updates
-waiting on survey data
-Compare section by section and whole drawing

Robert discusses probing results of Kyle and whole bay and island, there number of 40,000 CY was exceeded and the number is around 50,000 CY now

Discuss Grid Sampling

Number of samples collecting? 50 possibly

CRA discusses sampling method with sliding hammer
-Robert discusses fluff factor
-Check depths and trends and level of comfort
-CRA to send out sample map to group and matrix
-Dredge area moved in 100-150 ft from original area

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
23 August 2006

-What is the CRA sampling schedule
-Discuss on-site meeting

Media
-local reporters, TV from Traverse City, Canada
-Keeping group small and manageable if possible
-Get a list of who is coming
-EPA or PD to get fact sheets ready for the group
-Give fact sheets to the media if they come by
-media advisory will be sent out on Sept 20th
-Not talking about future uses, costs or policy
-Always can contact Chris with questions

Wood Sampling Results
-Data being validated
-11 wood samples
-1-inch corer drill bit – two holes on each side
-Dups and MS/MSDs below state background levels
-Fill material
-Background – no exceedances with bay area itself
-Wood will be stockpiled at MCM until ready

Robert needs to tell them where to place wood for cleaning
-Need to get together with EC later regarding the wood

Funding will be resolved later

Sand cover – spread sand over in spreader box and move around the bay – spreader box to be used after dredging is complete

Placement of the sand cap could be difficult due to underwater operations

Joint permit – need to send in drawing of viewing area

As long as the core approves it will be fine

Diameter of sampling tube is 2"
-How much time before samples are placed in jars
-Core open and then sample is collected right away
-Ask about protocol

September 19th – field trip and then sit down for meeting. Room will be at the Ramada Inn

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
23 August 2006

Put signs up at Bay
-laminate the flat surfaces
-make schematics to show the process

Call ended at 1515

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
31 August 2006

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday September 7, 2006.

-1000 meet at trailer and go down trail with dignitaries
-No dignitaries at MCM Marine
-Who will be speaker and what they will discuss
-Dredging Limits
    -Mark Tuchman – EU 1,2,3,5 & 8 areas only sampling
        - Surprised and not what we had discussed on call last week
-Additional samples in EU 3&4
-Permit letter went out for viewing platform
-What is drop dead date to complete construction – Before the 19th
-Jim will contact Ed and Jim at the USACE and MDEQ
-Notification – Give notice Jim gave notice on 18 Aug-27 Aug They acknowledged Jim to update
-Notice to mariners complete
-Field verification sampling plan
-Comments to incorporate
-Not worried about fluff layer
-Remove hydraulic dredging
-Judy sent org changes to Kyle
-MCM sub to EC
-Mark instructs Kyle to finalize FSP
-Weston to proceed with dredging
-Contingent on how they proceed with dredging in outside area
-1030 to discuss dredging in
-Survey Match
-Place order for plastic check overlap
-Ken needs to order plastic tomorrow, order ASAP
-How far off pilings
-Official drawings from CRA with limits of excavation
-Do we approve survey

QAPP MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
31 August 2006

The QAPP meeting was held at 2:00 PM with WESTON, US EPA, MDEQ, CRA, and Phelps-Dodge in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday September 7, 2006.

Original Intent of Project in 2004:

Primary – Mass Removal
Secondary – Meet Criteria

Field Sampling Plan:

Drill hole in sample core to decant water
Coordinate system available with drawing and table
Decision process beefed up
Verification samples to be collected after redredging
Survey base of dredged area
Sand minimum of 6 inches on exceedences
CRA doing reduced validation
Data Transparency
Data available for independent
Reduced vs. complete data validation
Paul Wiseman to forward comparison of reduced vs. complete data validation
Lou and Judy to send out org chart
STL Formerly Quarterra
Lou, MDEQ, and Phelps-Dodge not on org chart
Change Quarterra to STL
CRA calculates 40,000-57,000 cy
Insufficient time to conduct survey in 2004/2005
Goal is mass removal not complete recovery
Cr and Hg Hot Spot removal
Intent to remove mass concentrations
Data at time of decision that 2500 mg/m3 for Cr and Hg was at 0.5, was acceptable and arbitrary

New samples show
Weston and Northwest surveys close within 1,000 cy
Discuss MDEQ quality sampling previously
Composite homogenize samples with sand and sediment
Silt ND 250 ft midpoint
Additional sampling info
Some favorable data same elevated levels
RB discusses send corner exploding near St. Mary's River

QAPP MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
31 August 2006

PD/CRA intent is to remove timber not necessarily tentacles
CRA substantially revised dredging limits
Weekend sampling helped redefine limits very well
Weighted average over entire core
Utilize composite average
PD's prerogative
Got to remove 25,000 lbs Cr & 5,000 lbs Hg over entire bay
Concentrations will be provided on new dredging limits
NE corner has 0.5 to 12" Cover
New information will be relayed to Renato with explanation
WESTON to have new figure to CRA today and data/figure tomorrow morning in excel data
Renato for review today
1400 conference call tomorrow
Need papal blessing tomorrow
Submit to Weston – EC
Bring in on NW little North and little East
Should not impact EC removed actluatnes
Final drawings tomorrow, First thing Friday morning
Northwood could survey in starting point of new dredging limits
New drawing will give extent and thickness
Probe depths to be used as guide to sand
Minor distances on shoreline causes ki taper
Velocities higher to north and tapers to south
Sand cover comes from right
EC does not need dredging area to begin
Going after higher concentrations may justify increased event
Was to review exposure limits
No VSR sampling outside of dredge limits
Rentato to come to site on Tuesday
WESTON to be EPA rep on Wetlands
MDEQ discusses delisting of site, discusses conducting quality review to confirm that clean up levels have been achieved after received revised objectives to get early enough while still mobilized
RB Project objectives have not been revised
Dredge area has not been revised by tailoring dredge limits
Dan J. (PD) appreciates the consideration of MDEQ, after QRT review for Bruce VanOttera
Need formal presentation so can make field changes to possible delist site. RB side note looking at moisture content 70%, need 40-50 % range, no drying time. Dan is discussing with city representatives to take wood. MCM also persisting wood disposal compositing. Bruce to come back on 7th of September
Mark T – Need MDEQ input and may have to modify plan based on MDEQ input. No MDEQ rep available for call tomorrow.

QAPP MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
31 August 2006

RB – Relaxing long term monitoring and site delisting. Need to hear back from MDEQ ASAP firm yes.

EPA PROGRESS MTNG

Conference Call
14 September 2006
2 pm EST

Attendees:
C. Lantinga, S. Meyer, A. Dickinson, J. Burton, S. Bosko (Weston)
Bruce ??, Mark Tuckman, EPA
Dan Johnson ??
Robert Bresson, Kyle Malo, Paul Wiseman, CRA
Mike Ripley
?? others

Tuckman asks for update from Burton

Burton says there are improvements since etalking this morning. Yesterday Weston received notice of change from Econ regarding dredging and placing curtain at mouth of Bay claiming changes/additional costs are not their responsibility. They claim that changes in conditions were out of their control. Weston denied their change order request yesterday, and forced them to resolve it through dispute resolution and they have a "duty to proceed" while this is being resolved. Also, yesterday Weston was informed that instead of 200 yards needing to be dredged for access, MCM told EC that they need to dredge 1,000 cubic yards for access to the site.

Right now, there is a silt curtain installed at the Bay all the way across the Bay, but it is not long/deep enough. EC is procuring additional silt curtain panels that are long enough from another dredging firm in Traverse City. It will be delivered today.

Weston has gone out and re-measured the current velocities at the curtain, although it is an EC responsibility, to determine that the proper curtains are being used. The proper curtains are being used. Tuckman asks about the measured velocities. Burton states them.

Tuckman asks if the new curtain will be installed per the amendment. Burton says it will be.

Burton notified the USACE about the new volumes that need to be remeoved, and received a reply from USACE, Ed Arthur, today who said that no additional information is needed. Proceed. Burton has not heard from Mike, but as the new volumes info is only a notification, Burton believes the job should be able to go ahead.

Burton believes access dredging can begin tomorrow morning, and production dredging can begin Sunday morning. That gives the crew 2 days to dredge before the observation begins on Tuesday.

Mark asks if the silt curtain is already in place? And if anchors are sufficient?

Burton says that the curtain is in place and properly anchored, but not long enough in some places. When the new longer curtains arrive, the curtains in place now will be shuffled and the new curtain put in the deep spots. The longer curtains will go on the east side of the Bay, and the shorter curtains that are already in place will be shifted west.

Lantinga states that Weston has measured water depth along the curtain length and can tell EC exactly how much curtain length/depth is needed. He describes the connection between curtain pieces.

Tuckman asks if the curtain has been sufficiently anchored.

Lantinga says that he has already noted some issues where additional anchoring is needed.

Burton and Lantinga state that Weston will inspect the curtain each time they are out taking turbidity readings and will be notifying EC immediately of issues.

Tuckman asks how long the access dredging will take and when the curtain will arrive.

Burton says that EC is wishy-washy about when the curtain will arrive. In addition, MCM has said that they will need 2 days for access dredging. Discussion of schedule.

Tuckman asks Ripley about current near Tannery Bay. Tuckman asks if it is a flashy river as there are no damn structures up stream. Ripley agrees that it is not flashy.

Tuckman says if dredging is to begin on Sunday, we need to have the dredge limits defined.

Wes (CRA) has sent out a figure of dredge limits. A new green line is the revised boundary for the total area to be dredged. There is one area to the west where this is very little mercury data, and he has spoken with Judy and Reina about whether the dredge area should be changed/extended in that area. Wes talks about limits and optimizing the dredge areas. He talks about total dredge volume.

Tuckman asks about the area bowing out at one spot on the figure.

Wes says that the volume there is approximately 300 square feet, 1 or 2 feet deep; 2,500 cubic yards in that area.

This is the revised contour. The older points....

The volume model that CRA did before is a backup to the new one that hones in on the contaminated material.

Judy adds something unintelligible.

It will take 24-48 hours to finalize the dredge limits for that lobe.

Burton says that it would be better to get the info sooner so that dredging can be sure to commence.

Tuckman suggests that that lobe could be a second priority that is completed after everything else is done.

Burton reminds all that there will be some extra dredging done to maneuver out there.

Someone asks where the access dredging will be.

Burton says the old southeast dredge channel will be used again. This should be about 600 yards, approximately.

Someone asks if the lobe could be gotten during the access dredging. BH13 is the location of the lobe.

Tuckman says, again, that lobe could be low priority and done at end of project. It might be 4 or 5 days of work at the end.

There is more discussion about coming from a "Superfund standpoint" and Superfund criteria....

Stephanie says that if you leave something in place at the site that is over Superfund criteria for monitoring, then PD will not be off the hook for monitoring after the removal. Stephanie says she assumed that PD's objective was to not have to do any follow up monitoring.

PD replies says that they want to get 95% of contamination or more from the Bay and avoid having to do any biomonitoring.

Someone agrees that it would be good to leave that lobe for the end of the job, but that even if it is removed it may not mean that there is no need for biomonitoring.

Someone asks how does increased volumes play into the overall mass removal that Phelps Dodge must make.

There is more talk of expectation for Phelps Dodge for end of removal project.

There is a question about if the contractor will charge more for access dredging. Burton says that they will be payed for anything that is inside the original dredge limits.

There is a discussion of smoothing out the dredge limits in an area where it is jagged.

Someone asks about the revised removal volume. CRA says the new line is 40,000 cyd, assuming an additional 3,000 cyds overdredge or so.

Burton suggests that if CRA is preparing a figure of dredge area, show the dredge area on the map and give us a 2nd map showing the dredge area and the proposed access route and give it to MCM. Knowing that the access routes need to start in the eastern mouth of the Bay where the dredges are now.

There is a discussion of the water depth in the lobe area. Again a suggestion to leave the lobe to end of the job.

The further west in the Bay, the more shallow it is.

Suggestion of putting suggested dredge lanes on the figure, so that MCM will access dredge over the lobe.

Someone proposes coming in from north of BH22, then due south, then east at west at BH??

Someone says that we can't tell the dredgers how to get in there once they get going.

Burton says all we can do is show them something. They will get payed for the dredging, unless they have to do extra maneuvering to perform there dredging.

Burton says that if the path/dredge limits are smoothed out it would be easier for dredgers. By following grid lines, that would be easier for dredgers.

Tuckman points out staying along the 2,500 contour. Moving lines outside gridlines, etc, discussion. Discussing turns in access dredge route. This will create a little bit more volume.

Someone asks if it is worth changing the lines on the figure.

Burton says the reality is that the dredgers will not be able to do a zig zag or anything exactly as drawn on the figure.

CRA talks about where they could move the line to on the dredge limits figure.

Tuckman asks how much volume these change would add.

CRA responds that the area is 3-4 feet deep, 50 feet wide, 200 feet across; volume of 1,100 cyds. Tuckman says it might be worth it to try and get that out.

CRA says they want to make sure they have enough volume left to get the sediment in the NW corner where the mercury concentrations are higher.

Burton suggests that it would be nice for map to be squared off if we could. Pointing at map.... He suggests a set of steps along the west side might work well.

Burton suggests that we wait until we see where we stand tomorrow to see if the curtain is in.

Someone says that there really only needs to have equipment in the water for the dignitaries to see.

Burton says there is no reason to think that EC will not be able to get started next week.

Lantinga announces that he just received an email from EC saying that the curtain will arrive by 4pm today, and the crew will work late to get it installed and complete the installation tomorrow morning.

Tuckman asks that Burton work with CRA to finalize the figures. Burton tells CRA that they should call him if they have any questions.

Burton says that it would be best to receive the drawing by tomorrow morning at the latest.

CRA states that CAD will not take long.

Burton asks to get the aerial photo. CRA says it is large and difficult to email.

CRA asks about the last material on the west side.... There is more discussion about the shape of the dredge area and how they relate to contours.

Burton reviews the suggested dredge line again for CRA. And more discussion of grid lines and dredge limit lines.

More talk of the mercury concentrations in the west corner and need to get that material removed.

Tuckman asks Burton to work with CRA to get dredge lines out by tomorrow morning.

Tuckman moves on September 19 meeting:

Burton has sent out an agenda starting point for agenda on September 19. Tours in morning, goes on discuss schedule.

Group agrees that they would like to have Envirocon available on Tuesday to talk to.

More discussion of logistics of site visit next week.

Tuckman asks Burton to add items to agenda for next week from pre-construction meeting. And complete the agenda.

Tuckman says there are no more permit issues. Burton says that he will prepare the permit request to extend to November in case we need it. Tuckman reminds Burton to send courtesy email to USACE and MDEQ that we will start dredging on Sunday.

Tuckman says we will not talk about the wood.

Tuckman asks if anyone else has any other pressing issues and asks that Burton keep group posted with curtain progress, access dredging, etc. And contact Tuckman over the weekend if there are any issues that he is needed for.

Meeting ended at: 15:32

Weekly Status Meeting
12 October 2006

Weekly Status Meeting Started at 1400

US EPA
MDEQ
USACE
NOAA
Phelps-Dodge
WESTON
CRA

Update of Activities
J. Burton discussed activities since the last progress call on 5 October 2006

- Since last call about 1200 cy of sediment dredged, rate has not been that great but picked it up, 468 cy 10.11.06
- The total to date is 2,800 cy (estimated) which is at about 7% of the total cubic yardage to be removed
- Approximately 850 cy of dewatered material was disposed of at Dafter landfill and 1500 cy on the pad waiting for disposal
- MCM is adding sawdust to sediment expedite the dewatering process
- Where are mixing sawdust?
- WESTON stated that EC is using a loader on the pad to mix the sawdust into sediment and mixing it using a loader bucket
- WESTON stated that three trucks are scheduled for tomorrow, upwards of 600 or 650 cy to ship to the landfill
- WESTON stated that there were no problems with the paint filters tests, therefore material was okay to ship
- WESTON stated this week that there were no problems with the water levels, but there were mechanical problems due to the grizzly, MCM added more spray bars to grizzly, which has increased the production with the additional water
- WESTON stated that MCM sees problem and then attack it, do not foresee problems and work to avoid them, the downfall today still remains the breakdowns
- Cycle times were calculated with the buckets and showed a more reasonable cycle time, at about 60 cy per hour
- Article in paper stating that the dredging was meticulous, all discussed article in paper shortly
- A local newspaper called the press office for more information
- The news article talking about was in the evening news and did not look at the paper
- EPA stated that optimistic of getting work done
- WESTON stated that will get the Bay Mills paper to the group by scanning

Turbidity Curtain

- Main curtain is in place with continuing maintenance

Weekly Status Meeting
12 October 2006

- The lane curtain is in place and is working fine though just knocking down turbidity not stopping sediment transfer
- Sent letter to EC stating did not define project properly and did not provide correct equipment
- Letter received back stated that they could still get the project done in the original time frame specified
- EC stated that MCM produced 564 cy in one day, stated could get done by 22 Nov still (of note, the amount of 564 cy has not been achieved in one day)
- EC requested a conference call and wanted to voice their concerns about the project
- EC has come the realization that they won't be able to finish the project
- WESTON based on conversation with EC, EC would not be able to finish this year. EC would prefer to stop work sooner than later would be and resume work in April (mobilization) and begin water work on May 1 to complete the project
- WESTON one of the final conversations today, get some feed back as to how far would like to proceed, see what think about the recontamination issue
- WESTON would like EC/MCM to continue as long as possible, MCM wants to prove their methods and WESTON would like to give them the chance to do that
- MCM will need to retool over the winter and do what they promised they would do to get the job done
- Does WESTON think that MCM has other equipment? (Posed by EPA)
- WESTON does not think that MCM has better equipment available, but does think they now have taken into consideration how seriously that the breakdowns will be an issue, they proposed a 24 hours schedule and have left themselves with little time for breakdown
- For each piece of equipment they have, WESTON will go through a critique and see what solutions they can come up with
- WESTON doesn't want to see the same issues come up again in the fall and wants to make sure the work is performed and completed in a timely manner
- WESTON stated that if we invoke liquidated damages it would bankrupt MCM and would cause trouble for EC, do not want to cause those issues, just want the project to get done
- EC/MCM should be covering the remob/demob, and that will be confirmed before hand to make sure they are fronting those costs
- Seemed like EC was not intending to charge the amount for the remob and demob
- Turbidity curtain lanes had been installed, also, it would be good to complete an EU before finish for the winter
- WESTON would like them to finish as much as possible, also to remedy the problems as soon as possible
- Not WESTONs final call how the Bay is left that is up to the client. WESTON has not discussed anything with EC, but EC is aware of recontamination issue and leave the cattail island for next year, WESTON did calcs for going over to cattail island and stopping, that would be at about 13,000 cy, if MCM could maintain consistently an amount of 400 cy per day and could reach cattail island by Nov

6th, if maintain a rate of 300 cy could reach cattail island by Nov 14th (stoppage line)

- WESTON stated that if we wanted to go right up to cattail island, that would leave about 12,000 cy, with into November, and could certainly stop sooner, could go to EU-5, EU-6
- Group likes that only one face is exposed to contaminated material at one time
- Would expose about 400 feet of open space, but EC could put some sand down to be safe to cover the edge of excavation
- Taking clean sand and putting it up against the cattails from within the dredge operating area, would help stabilize bank, using the native material to build up slopes
- Could do the same thing and extend the EU boundary of EU-2, put the clean sand up against the open cut face, which is acceptable under the current permit
- WESTON may still have to do some paper work, and see if M. Zelenski would agree with using the native sand to cover the exposed banks
- EPA is not sure we can make 400 cy per day, WESTON then stated that it is a possibility that we may only get half the distance
- Do we think that have fully talked about working through winter in a different way, is there no way to do from land side?
- WESTON stated to excavate through the ice would be difficult and would have to set up entirely different way of moving material out to be loaded
- CRA stated that working in the winter is different and the current system was not designed in mind for work in the winter months (specifically the water treatment system)
- WESTON would like to for right now offer up that proving EC/MCM method works and that resuming in spring is necessary, would like them to keep working enough to prove can make rates, do not want the same thing to happen this fall happen again in the spring
- WESTON stated that the rate is so low, want to give MCM the chance to prove to the group that this is the correct method and that the work at the can be done at the planned rates using the current method
- Shut down sooner rather than later to make sure that the methods are correct and make sure that the recontamination won't be an issue and that we won't have to redredge a large area
- Recontamination will be an issue no matter what, if work is extended to the spring
- EC will have to cover their own costs for demob and remob
- EC should maybe use the time to reengineer the process that they are using now and see if can come up with a better way of working area
- WESTON stated that MCM has not yet experienced all of the problems that are ahead with larger wood as we move south and west and the organic material on cattail island, those areas may prove to be issues.
- WESTON would rather see MCM face these issues now and make sure the current system can handle it, if not the winter gives time for reevaluation and retooling if necessary

- Weather days that will occur now will happen in May also, similar weather patterns in the fall and spring in this area
- Are we anticipating that the work will be significantly changed or if it will be a total change?
- WESTON thinks that the work will be modified but, not totally changed, EC may suggest a different way to deal with the wood
- WESTON believes that MCM would like to prove that the method can work as was stated it would
- WESTON will be discussing the work at hand and will not address issues regarding access dredging and the curtain
- WESTON would like to see what the EC proposal is and come up with a decision next week, there is no monetary down side to us getting the work done, recontamination is the main concern
- 2 to 3 foot dredge cut is not too deep so there should not be as large of a problem, just want to see how far EC wants to go before making a final decision
- See if MCM could continue and just go to half way through DMU-3 and then go back and start back at east again
- CRA noted that EC/MCM and WESTON had weekly meeting yesterday and discussed shortly the fact of not finishing
- DMU-3 is actually 3-foot, if serious about 2-foot at pretty much 3-foot across, will be at about half way tomorrow, should we see what their plan is will be a little further in DMU-3 and see if they can back up to six and move forward. Calculated about 10,000 cy to go half way through DMU-3, DUM-7, DMU-11. Move from east to west
- Find out when and why that time EC would like to stop operations for the fall. EC wanted to quit and Joe from MCM sounded like he wanted to keep going and see how much production can be ramped up
- WESTON would like to see that can really do what they said they could do with retooling.
- It would also be good to know going into next spring that we have encountered all of the issues that could be foreseen
- Wood that has been pulled out so far has not been worth saving, it is small and bad wood
- Dewatering and mechanical breakdowns have been experienced but MCM has not yet experienced cattail island and that could be the source of different problems
- Cattails may be another issue all of their own
- Talked about in the meeting with MCM that it would be a possibility to burn off the cattails to remove some of the material and would eliminate a lot of the difficulties and but then would need to get a burn permit
- WESTON stated that it would be nice if could finish at least one EU, CRA collected four sediment samples, the sample results from the four cores are positive, magnitude below the previous samples that were collected in the Bay
- CRA wants to make sure get the top six inches and have a core to look at using a clear plastic tube, with the Ponar or different samplers will not have the core, but could still collect a grab sample

- May have to try a new sample procedure if not working
- The previous concentrations in the area where the bucket was taken from are low in comparison to cattail island area where the higher concentrations are present.

Health and Safety

- None

Wood

- St. Marys will take the wood. Also cleaning the wood and attempting to clean the wood going into winter will be difficult due to material freezing, would need to get a steam cleaner or a hot water pressure washer

Meeting on the 17th

- Meet at MCM trailer Tuesday morning at 9am meet and discuss at meeting regarding weekly meeting
- May or may not have MCM as part of the meeting depending on the decisions about continuing work into the spring
- Will inquire if meeting has conference capability
- Seems like it should not be a problem with the extension of the permit past Oct 31st and will need to file an extension request. Have to include any changes in the permit, so if EC is suggesting any changes to the dredging activities will need to have that information before submitting permit
- Modify if necessary our disposal permit, need to conduct some administration requirements due to the work extending into the next year

QAPP

- Follow up Tuesday
- Decision criteria for samples
- Sample procedures clarification
- Need SOPs from labs and need Mercury extraction for sediment
- Go through Org chart

Sediment into the River

- CSL cannot substantiate the claims
- The report talks about Benzene and other metals, and seems to have something to do with disgruntled MCM employees
- Trying to figure out what happen and when
- Call went into DEQ and think that the call was unsubstantiated
- Watching dock and MCM put up angles pieces and where unloading take small buckets and dewatering the sediment in the scow, WESTON going to keep looking into and will make sure did not happen

Meeting adjourned at 1510

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
29 June 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday July 5, 2007.

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

Jim Burton
- Chris sent out the daily bulletin
- Heading out to sequence two and then going to head to cattail island

Chris Lantinga
- Cattails were not causing an issue and moving back into sequence 2
- Put in a pier and over to where they could dredge out to
- Temporary boardwalk, very temporary
- Cutting next to the shore could cause some issue
- Modified the plan slightly

Jim Burton
- Using pier and then going to very temporary
- Sequence 1 took about 7 days, 425 min, 825 max, avg 550, all in CY
- Think that the change outs should be faster, with the
- Now there is a new operator that has much higher yardage
- Dropped a bit below the 599.5 level for the water levels
- Barge change outs are still the main hold up
- White Lakes has signed a contract and will mob sometime after the 4th of July
- Should be up dredging after the site visit
- EC will work with
- White Lakes will start in the southern piece
- DMU-23 and DMU-24

Robert Bressan
- Rob will collect samples as soon as able
- CRA will start sampling after finished with Cut 2
- Rob would like to evaluate the progress as soon as possible

Chris Lantinga
- Start sampling as soon as possible and WESTON will assist where possible

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
29 June 2007

Jim Burton

- White Lakes should be able to do about 400 CY per day, end date would be August 8th, would have the contingency
- The end date includes the yardage of overdredge
- August 14th is the end date for dredging
- August 22nd is substantial completion
- If White Lake can help, then they will be able to pull themselves back onto schedule

Chris Lantinga

- First material was dryer than last year
- The material coming from cattail island is a lot dryer and the
- Using sawdust and not using all of it
- Talking about moving the Jersey barriers out to the wall, so that they can be moved out to increase the pad size
- MCM can move wall over and Joe (MCM) would like to move it out for better
- Are some issues with the pad size
- CSL spoke with Norris about getting more trucks

Jim Burton

- If the shuttles were changed out faster the dredging would be faster
- It was suggested to EC that they had three shuttles instead of two, it make for more productivity
- CSL has requested all of the information from White Lakes, and a work plan amendment

Chris Lantinga

- Survey was done by Northwoods, going to get the information for
- Water logger needs to be fixed and will be fixed this afternoon

Jim Burton

- Work will be conducted on the 4th of July and work will be conducted most likely due to delayed schedule
- On the 11th will have site tour from 0930 to around 1200, have the meeting from 1300 to 1400 and then have EC come by at 1430 for a progress update
- The meeting is conducted every three weeks and it is a better travel time

Meeting adjourned 1500.

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
5 July 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Wednesday July 11, 2007.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

07.05.07 14:30

Jim Burton (Weston):

- CSL sending out daily progress bulletins
- Exceeding contract rates right now around 800 CY per day
- As of the 3rd of July had done about 40% of the impacted sediment
- In sequence two and are about 100 feet to go
- Cattail Island about 5-6 days
- Helping the progress with lower water levels and the sediment is coming off a lot dryer
- The weight of the sediment is lighter
- Around 600 level, but about ½ foot higher than the minimum water elevation
- 2nd dredge, contract is in progress and possibly around the 9th, expect to have second dredge by the 14th
- Trying to get more information about 2nd dredge
- Reconsidering bringing in second dredge, possibly, need to get in 2nd dredge
- Does not think will be able to maintain the rate after cattail island
- 2/3 will be done after cattail island
- MCM would start working on the north side of cattail island and the additional dredge for the southern part of the island
- Depths are pretty much on target, except for a couple over dredging instances
- No other issues at this point
- Worked through midnight on 3rd and conducted maintenance on the 4th
- Dredging resumed this morning
- Can discharge water as long as nothing changes with the concentrations for the samples are low

Robert

- Natural slope would be about
- Samples would be done on Saturday

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
5 July 2007

Jim Burton

- Meeting will follow same schedule as last time
- Hopefully all will be the same
- Conference room from 9 to 5

Meeting adjourned @ 14:50

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
19 July 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday July 26, 2007.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

0.7.19.07 14:30

Jim Burton (Weston):

- Past 7-days they have dredged about 3100 CY
- High was 900 cy per day and has dropped off since then, around 200-280 and the average is around 400 cy per day
- Problem with the cobbles are making it an issue
- Issue with over-dredging in the sand, hard packed
- Approx 60% completed
- 4000-5000 CY of over-dredge depending on over-dredge
- Assume only 800 CY could finish on schedule using contingency days
- August 14th could be done with dredging
- White Lakes mobbing today and will be on-line on 7.20.07
- Original target date was wanted to be up and running 7.18.07, but mobbing now
- Boulders are going to be most likely going to have White Lakes finish up areas with cobbles and should be able to handle it better
- Boulders are to be segregated
- Boulders will need to be hosed off before sent off and would need to be cleaned
- White Lakes will start tomorrow and
- Landfill is having a problem handling sediment right now, but today they are receiving material from Canada and it is an issue today
- Doubling the rate at which sediment is being removed, pad should be relatively empty by the end of the day
- Average of about 43% solids out of bay, 24% and high at 76% and average at 50% solids, density around 1.2, sand so far has had a density around 1.5 and the density of the material should not be a problem
- Shoreline restoration working on how going to proceed with the shoreline restoration
- Work has been agreed upon and going to work in different areas, therefore the restoration will be different in areas with varying depths

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
19 July 2007

- Shoreline restoration work will be done at the end
- Crane for off-loading was broken down for about 12 hours
- Off-loading crane will stay the same for right now, EC thinking going to need the bigger crane
- Might be having a safety audit in the next couple weeks, next site visit for July 31st
- See what dredging operations when get things going
- Will be tracking dredging operations separately and then
- Follow up on the rocks and the cobbles
- Water levels have been around 600

Meeting adjourned @ 14:52

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
26 July 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Tuesday July 31, 2007.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

07.26.07
14:30

Jim Burton (Weston):

- Daily Bulletins getting and looking at in past seven days
- Averaged about 700 CY per day, WL was not working over weekend
- About 60% of entire job, MCM moving to north area, stopped dredging due to boulder and hard sand
- White Lakes moving to the West
- White Lakes should be completing areas where MCM left off
- Thinking that the bucket
- CSL states that if they move to the north might get to boulders within a few days
- MCM dredging in northern area and White Lakes in southern area
- Boulders have resulted in a slow down
- Bottle neck with shuttles and then could switch to larger bucket
- Waiting for a benefit and Skip has been out evaluating processes
- Off-loading activities halted and then were resumed after
- Still maintain 700 CY would put them about 25 working days, and it will put them a bit a over
- MCM should be able to pick up the pace in DMU-17 and DMU-19
- Better idea on Tuesday of what actually capable of doing
- Robert joined call at 1442
- Seeing if doing the additional sand and will most likely take advantage of the sand
- Regarding as shoreline stabilization
- Minimum of 500 CY which is about 40%

Robert Bressan

- Geotextile with the filtrex sox and not much wave action, not to go beyond
- Keep the shoreline stabilized, placing sand along the bank as an additional level of comfort

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
26 July 2007

- Additional 30,000, there is some merit to placing sand, should not cause problems due to sand
- Placing the sand for stabilization only
- From discussions with Doetsch stated going to cause some problems with no organic growth
- Going with the 2 to 1 slope and place the sand on top of the slope
- Need to check with Bruce and make sure he is okay with it
- Will check with Doetsch to make sure that sand will not impede growth of the livestakes
- Shoreline submittals

Jim Burton

- Jim believes budget could take it
- Sand cover could be used as extra days
- Thinking that it will be okay with the core
- Site visit scheduled for 31 July 2007, same schedule
- Chris to feel Skip out about the work and potential bottle necks

Meeting adjourned @ 15:00

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
9 August 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday August 16, 2007.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

08.09.07

Jim Burton (Weston):

- Dredged about 900 CY, average, 600 CY MCM and 300 CY WL
- Have exceeded initial contract weekly rate and revised rate
- Projected finishing on 18th of August a week from Saturday
- Doetsch will start mobbing on the 13th for shoreline work
- Projecting that work will start on the 14th
- Dependent on how dredging progresses
- 5,900 CY last week
- Originally progress to August 18th, based on the rates, should be able to hit target
- Might want to advance meeting to a week from today
- J. Burton does not know what schedule be
- Shoreline restoration should be about a 10-day operation
- Doubt that work will actually be done by the 22nd
- EC is trying to be done on that date with work still
- Risk that work my be done if meeting is held off until August 22nd
- People would need to travel on that Monday
- Daily schedule update to let group know where it is

R. Bressan

- Original a geotextile that was specified for the shoreline, going to use a coconut biodegradable mat
- Ed Arthur wants shoreline to be stable, but that's it
- Do not anticipate any concerns
- Touch base with Bruce VanOtteren
- 2-24" socks and 200-300 feet of bank that is shallow cut
- Intent to meet with Skip, Doetsch ready to move ahead
- Entire bank will be covered with Filter Soxx

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
9 August 2007

- Emil will be sent to group

J. Burton

- 10-day schedule for shoreline work
- If start on time will still be going at the point of the meeting
- Chris will keep ontop of schedule and update the group
- Jim a trailer has been provided to CRA and then all the equipment is available and will start sampling
- Looking to collect samples where MCM dredged and WL dredged
- Still need to get the hot spot on the way out
- Plan is for White Lakes to finish areas with boulders and then MCM will finish in the North
- Keep progress with updates, keep in touch about dates for next meeting

Meeting adjourned at 14:52

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
16 August 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Wednesday August 22, 2007.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

08.16.07

Jim Burton (Weston):

- Last weekly status call
- 4,400 CY completed last week
- 3200 CY remaining in bay area, plus 250 in hot spot, 400 CY overdredging, about 5 days remaining, should finish sometime on Monday
- Monday mob for shoreline restoration
- Based on rate for shoreline restoration should be done on the 22 August 2007
- Should be done by the 22nd
- Numbers are pretty much on target for totals estimated
- Shoreline only went up to pilings and other alterations, will have to wait for survey
- Want survey to be done as soon as possible so that data can be compared
- Planning on completing remaining 10-15 samples and will sample tomorrow morning
- The beaver dam area will not be removed to get to the area, there is about 45 feet and then beaver dam
- 2:1 slope and still working along southern shoreline
- All sample results will be coming in tomorrow (8.17.07)
- Sample results will come back and samples are, if there is any exceedance and results will be discussed after
- Tentatively plan for a call tomorrow and will be 3pm
- Material from the dredging operation, is just the material that is settling out of the water column
- WL is pretty much through the boulders, almost to the shore in that cut
- Media event possible for later in September

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
16 August 2007

- Will be meeting next week on 21st in the evening for site visit and then have a meeting on the 22nd in the morning

Meeting adjourned at 14:57.

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
30 August 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. The next weekly progress meeting will take place on Thursday September 6, 2007.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

08.30.07

Jim Burton (Weston):

- Waiting to begin meeting for Marc Tuchman
- Has been rain and inclement weather, dewatering has been delayed.
- Dewatering should be completed on the 6th and the demobilization should be complete the 13th
- Only that left is dewatering, water treatment, and decommissioning and removal of all equipment
- MCM has demobilized and White Lake is waiting for MCM to move equipment before brining equipment to MCM yard
- View platform has been left, but all other docks and trash were removed
- Sept 13th demob should be completed
- Public meeting is set for the 20th
- The BPAC meeting would be the 20th in the evening
- BPAC wanted to do that meeting in Canada and the EPA asked that it be made in US instead
- All PD should be heading out of town on the 20th and then will shoot for the 19th so that PD can be there
- PD wants to speak at the meeting for BPAC
- Use one presentation at the meeting that covers project
- Need to make sure that presentation shows where goes from here
- DEQ would be good to talk about the next step for the site from a superfund standpoint
- By Sept 6th should be completed with dewatering
- There is still mud in the last two scows and is from cleaning activities
- Rinsed it first and now are dewatering it again before off-loading
- Lessons learned session after event to go over the meeting
- Meeting for lessons learned would be on Sept 20th from 1-2:30 pm

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
30 August 2007

- The event is scheduled from 10-11 am, there was no set time in the first place
- The city is going to send a deputy major to the event
- Keep the event pretty low key
- Overall big picture and what was removed for opening remarks
- MDEQ, EPA and PD will talk about 2-3 minutes a piece
- Ron is going to invest time into the event
- Can make a call at the Ojibwa
- Have the Ojibwa provide lunch at noon before the meeting
- Data validation report for CRA
- Data will be available later in the month and then follow up with Rob and Paul regarding data validation
- There is a rough agenda Susan Boehme will provide
- All will talk next week

Meeting adjourned 15:05

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
6 September 2007

The Weekly Status meeting was held at 2:00 PM with WESTON and US EPA in attendance via teleconference. The issues discussed during the meeting are recorded below. This is the final weekly progress meeting, work is completed.

Weekly Progress Meeting

US EPA
GLNPO
Phelps-Dodge
Weston Solutions, Inc.
CRA

09.06.07

Jim Burton (Weston):

- Jim giving update
- White Lake will complete demobing on Monday
- Office trailers and shuttles by the end of next week
- Rest of the sediment left is for demobilization
- About 2-3 trucks left around quarter day next week
- All work and final inspection should be completed next week
- Suvey should be back soon for comparison with MCM survey
- Demobing should be completed next week
- Weston walked around bay to check for any residual garbage
- White Lakes has demobilized from the bay
- All of the sticks are gone in the channel
- Socks already have green growing on them
- Susan is working on finalizing the plan for the BPAC meeting and the media day
- Weston can do the construction talk and CRA can do the confirmation sampling part
- Weston can discuss the change in dredging method and that White Lakes was brought in
- Shoreline restoration, see who will cover it
- CRA to keep the sampling generalized, not too detailed
- Jim working on putting together lessons learned for preparation for meeting
- Some of the biggest lessons learned were in the design, implementation, and actual dredging work
- Susan said the event will happen at 10am , will be at the head of the trail for the event and then brief with hopefully 30-40 people
- Waiting to hear about attendees for the media event
- CRA stated verification should be completed tomorrow

WEEKLY STATUS MEETING NOTES
U.S. EPA and Phelps-Dodge
Cannelton Industries Site
Sault Ste. Marie, Michigan
6 September 2007

- CRA waiting for survey to come in and will calculate the amount removed to be compared to MCM
- One more call should be scheduled before the media event and meeting

End of call at 14:53

Contact List
Fall 2006

Contact	Position	Office Phone Number	Cell Phone	Fax Number
WESTON				
Jim Burton	Project Manager	847-918-4039	847-254-8450	847-918-4055
Steve Bosko	Assistant Project Manager	847-918-4061	847-254-6829	847-918-4055
Shel McGee	Division Safety Officer	847-918-4002		847-918-4055
Chris Lantinga	Site Manger/FSO	906-253-9588	616-550-5358	906-253-9587
Annette Dickinson	Field Staff	906-253-9588	906-281-0430	906-253-9587
Sarah Meyer	Field Staff	906-253-9588	773-339-3134	906-253-9587
Amy Hamilton	Field Staff	906-253-9588	517-256-7663	906-253-9587
Ken McRowe	Field Staff	906-253-9588	313-268-4745	906-253-9587
Andrew Kiel	Field Staff	906-253-9588	216-409-0821	906-253-9587
James Molholm	Field Staff	906-253-9588	773-426-2068	906-253-9587
Keith Kidder	Field Staff	906-253-9588		906-253-9587
Diane Russell	Field Staff	906-253-9588		906-253-9587
ENVIROCON				
Patrick Davidson	Project Manager/Engineer	906-253-1757	810-441-7090	906-253-1915
Brett Bishop	Project Director	906-253-1757	435-840-4535	906-253-1915
Dave Schooley	Site Supervisor	906-253-1757	303-520-3653	906-253-1915
Chris Martin	Site Supervisor	906-253-1757	360-471-3045	906-253-1915
John Fike	Envirocon	906-253-1757	423-741-4187	906-253-1915
C.C. Causey	Site Safety Manager	906-253-1757	865-742-8782	906-253-1915
MCM				
Joe McCoy	Project Manager	906-632-4316	906-440-3006	
Robert Chartrand	Project Superintendent		419-349-1529	
Robert Cross	Engineer/Surveyor		231-740-3132	
CRA				
Robert Bressan	Project Manager	705-254-2438	705-256-9169	
Kyle Malo	Field Staff	705-254-2438	705-971-6329	
Dayna Linley	Field Staff	705-254-2438	705-971-9292	
Renato Pasqualoni	Engineer	905-712-0510	416-436-0160	
EMERGENCY				
Fire Department		906-632-3344 Emergency 911		
Ambulance		906-632-3344 Emergency 911		
City Police		906-632-3344 Emergency 911		
State Police		906-632-2217		
Chippewa County Sheriff		906-635-6355		
War Memorial Hospital		906-635-4460		
US Coast Guard		906-632-0967		
Emergency Response Team		90-632-3344 Emergency 911		
Agency for Toxic Diseases Registry (ATSDR) for chemical exposure		404-639-0615 (emergency) 404-639-6360 (non-emergency)		

2006 Sediment Geotechnical Results

Cannelton Industries/Tannery Bay

Sample Name	Sample Type	Sampling Date	Specific Gravity	Density (ton/cy)	% Solids	Paint Filter
Ship Material						
SS-4093-102506-JM-008	Ship material	10/25/2006	1.8	1.52	62.8	Failed
SS-4093-102506-JM-009	Ship material	10/25/2006	1.7	1.43	60.5	Failed
SS-4093-102606-AD-013	Ship material	10/26/2006	1.7	1.43	68.5	Failed
SS-4093-102706-AD-015	Ship material	10/27/2006	1.5	1.26	65.3	Pass
SS-4093-103006-AD-017	Ship material	10/30/2006	1.5	1.26	66.2	Pass
SS-4093-103106-AD-019	Ship material	10/31/2006	1.4	1.18	65.4	Pass
SS-4093-110106-AD-021	Ship material	11/1/2006	1.4	1.18	65.6	Pass
SS-4093-110206-AD-023	Ship material	11/2/2006	1.5	1.26	68.6	Pass
		Average	1.6	1.3	65.4	
		Minimum	1.4	1.2	60.5	
		Maximum	1.8	1.5	68.6	
Off-loaded/Wet Material						
SS-4093-102506-JM-010	Pre-sawdust material	10/25/2006	1.6	1.35	65.1	Failed
SS-4093-102506-JM-011	Pre-sawdust material	10/25/2006	1.6	1.35	67.8	Failed
SS-4093-102506-JM-012	Off-loaded material	10/25/2006	1.7	1.43	67.4	Failed
SS-4093-102606-AD-014	Pre-sawdust material	10/26/2006	1.7	1.43	63.4	Failed
SS-4093-102706-AD-016	Pre-sawdust material	10/27/2006	1.6	1.35	68.0	Pass
SS-4093-103006-AD-018	Pre-sawdust material	10/30/2006	1.6	1.35	45.5	Pass
SS-4093-103106-AD-020	Pre-sawdust material	10/31/2006	1.3	1.10	63.8	Pass
SS-4093-110106-AD-022	Pre-sawdust material	11/1/2006	1.2	1.01	68.6	Pass
SS-4093-110206-AD-024	Pre-sawdust material	11/2/2006	1.6	1.35	68.3	Pass
		Average	1.5	1.3	64.2	
		Minimum	1.2	1.0	45.5	
		Maximum	1.7	1.4	68.6	

2007 Sediment Geotechnical Results
Cannelton Industries/Tannery Bay

Sample Name	Sample Type	Sampling Date	Specific Gravity	Density (ton/cy)	% Solids	Paint Filter
Sand Material						
SS-4093-062607-AD-038	Ship dredged material	6/26/2007	1.8	1.52	75.9	Pass
Ship Material						
SS-4093-062707-AD-040	Ship dredged material	6/27/2007	1.6	1.35	68.0	Pass
SS-4093-062807-AD-042	Ship dredged material	6/28/2007	1.4	1.18	54.1	Pass
SS-4093-062907-AD-044	Ship dredged material	6/29/2007	1.5	1.26	59.1	Pass
SS-4093-063007-AD-046	Ship dredged material	6/30/2007	1.4	1.18	49.7	Pass
SS-4093-070107-AD-048	Ship dredged material	7/1/2007	1.3	1.10	57.5	Pass
SS-4093-070207-AD-050	Ship dredged material	7/2/2007	1.3	1.10	23.9	Pass
SS-4093-070307-AD-052	Ship dredged material	7/3/2007	1.3	1.10	37.6	Pass
SS-4093-070407-AD-054	Ship dredged material	7/4/2007	1.4	1.18	60.8	Pass
SS-4093-070507-AD-056	Ship dredged material	7/5/2007	1.2	1.01	28.7	Pass
SS-4093-070607-AD-058	Ship dredged material	7/6/2007	1.2	1.01	34.1	Pass
SS-4093-070707-AD-060	Ship dredged material	7/7/2007	1.2	1.01	51.9	Pass
SS-4093-070807-AD-062	Ship dredged material	7/8/2007	1.3	1.10	50.7	Pass
SS-4093-070907-AD-064	Ship dredged material	7/9/2007	1.3	1.10	38.9	Pass
SS-4093-071007-AD-066	Ship dredged material	7/10/2007	1.4	1.18	44.3	Pass
SS-4093-071107-AD-068	Ship dredged material	7/11/2007	1.3	1.10	37.3	Pass
SS-4093-071107-AD-069	Ship dredged material	7/11/2007	1.1	0.95	32.8	Pass
SS-4093-071207-AD-076	Ship dredged material	7/12/2007	1.3	1.10	40.5	Pass
SS-4093-071307-AD-078	Ship dredged material	7/13/2007	1.3	1.10	51.7	Pass
SS-4093-071607-AD-080	Ship dredged material	7/16/2007	1.4	1.18	49.3	Pass
SS-4093-071707-AD-082	Ship dredged material	7/17/2007	1.6	1.35	59.3	Pass
SS-4093-071807-AD-084	Ship dredged material	7/18/2007	1.4	1.18	47.3	Pass
SS-4093-071907-AD-086	Ship dredged material	7/19/2007	1.4	1.18	59.5	Pass
SS-4093-072007-AD-088	Ship dredged material	7/20/2007	1.6	1.35	63.2	Pass
SS-4093-072107-AD-090	Ship dredged material	7/21/2007	1.7	1.43	70.0	Pass
SS-4093-072207-AD-092	Ship dredged material	7/22/2007	1.7	1.43	67.9	Pass
SS-4093-072307-AD-094	Offloaded dredge material	7/23/2007	1.7	1.43	69.5	Pass
SS-4093-072407-AD-096	Ship dredged material	7/24/2007	1.7	1.43	65.5	Pass
SS-4093-072507-AD-098	Ship dredged material	7/25/2007	1.7	1.43	78.2	Pass
SS-4093-072607-AD-100	Ship dredged material	7/26/2007	1.8	1.52	69.2	Pass
SS-4093-072707-AD-102	Ship dredged material	7/27/2007	1.8	1.52	74.9	Pass
SS-4093-073107-AD-104	Ship dredged material (white sand)	7/31/2007	1.8	1.52	69.0	Pass
SS-4093-073107-AD-105	Ship dredged material	7/31/2007	1.7	1.43	68.6	Pass
SS-4093-080107-AD-108	Ship dredged material	8/1/2007	1.6	1.35	71.4	Pass
SS-4093-080207-AD-110	Ship dredged material	8/2/2007	1.7	1.43	71.0	Pass
SS-4093-080307-AD-112	Ship dredged material	8/3/2007	1.6	1.35	72.1	Pass
SS-4093-080607-AD-114	Ship dredged material	8/6/2007	1.5	1.26	66.7	Pass
SS-4093-080707-AD-116	Ship dredged material	8/7/2007	1.6	1.35	63.2	Pass
SS-4093-080807-AD-118	Ship dredged material	8/8/2007	1.7	1.43	74.2	Pass
SS-4093-080907-AD-120	Ship dredged material	8/9/2007	1.7	1.43	66.6	Pass
SS-4093-081007-AD-122	Ship dredged material	8/10/2007	1.6	1.35	63.7	Pass
SS-4093-081107-AD-124	Ship dredged material	8/11/2007	1.7	1.43	60.6	Pass
SS-4093-081307-AD-126	Ship dredged material	8/13/2007	1.6	1.35	69.4	Pass
SS-4093-081407-AD-128	Ship dredged material	8/14/2007	1.5	1.26	54.2	Pass
SS-4093-081507-AD-130	Ship dredged material	8/15/2007	1.7	1.43	61.1	Pass
SS-4093-081607-AD-132	Ship dredged material	8/16/2007	1.6	1.35	69.3	Pass
SS-4093-081707-AD-134	Ship dredged material	8/17/2007	1.6	1.35	62.6	Pass
SS-4093-082007-AD-136	Ship dredged material	8/20/2007	1.4	1.18	55.4	Pass
SS-4093-082107-AD-138	Ship dredged material	8/21/2007	1.5	1.26	61.5	Pass
SS-4093-082207-AD-140	Ship dredged material	8/22/2007	1.5	1.26	50.6	Pass
SS-4093-082307-AD-142	Ship dredged material	8/23/2007	1.4	1.18	55.8	Pass
SS-4093-082407-CL-144	Ship dredged material	8/24/2007	1.4	1.18	49.0	Pass
SS-4093-082707-AD-146	Ship dredged material	8/27/2007	1.6	1.35	60.2	Pass
SS-4093-082807-CL-148	Ship dredged material	8/28/2007	1.4	1.18	51.8	Pass
SS-4093-082907-AD-150	Ship dredged material	8/29/2007	1.5	1.26	55.1	Pass
SS-4093-083007-AD-152	Ship dredged material	8/30/2007	1.5	1.26	55.7	Pass
SS-4093-083107-AD-154	Ship dredged material	8/31/2007	1.6	1.35	62.0	Pass
SS-4093-090407-AD-156	Wet material/ship material	9/4/2007	1.5	1.26	51.5	Fail
		Average	1.5	1.27	57.3	
		Minimum	1.1	0.95	23.9	
		Maximum	1.8	1.52	78.2	

2007 Sediment Geotechnical Results
Cannelton Industries/Tannery Bay

Sample Name	Sample Type	Sampling Date	Specific Gravity	Density (ton/cy)	% Solids	Paint Filter
Off-loaded/Wet Material						
SS-4093-062607-AD-039	Offloaded dredge material	6/26/2007	1.5	1.26	61.3	Pass
SS-4093-062707-AD-041	Offloaded dredge material	6/27/2007	1.4	1.18	46.5	Pass
SS-4093-062807-AD-043	Offloaded dredge material	6/28/2007	1.3	1.10	55.5	Pass
SS-4093-062907-AD-045	Offloaded dredge material	6/29/2007	1.4	1.18	49.3	Pass
SS-4093-063007-AD-047	Offloaded dredge material	6/30/2007	1.4	1.18	41.8	Pass
SS-4093-070107-AD-049	Offloaded dredge material	7/1/2007	1.4	1.18	51.6	Pass
SS-4093-070207-AD-051	Offloaded dredge material	7/2/2007	1.2	1.01	31.3	Pass
SS-4093-070307-AD-053	Wet material	7/3/2007	1.4	1.18	50.6	Pass
SS-4093-070407-AD-055	Wet material	7/4/2007	1.3	1.10	34.5	Pass
SS-4093-070507-AD-057	Offloaded dredge material	7/5/2007	1.2	1.01	33.9	Pass
SS-4093-070607-AD-059	Offloaded dredge material	7/6/2007	1.2	1.01	35.4	Pass
SS-4093-070707-AD-061	Offloaded dredge material	7/7/2007	1.2	1.01	28.3	Fail
SS-4093-070807-AD-063	Offloaded dredge material	7/8/2007	1.2	1.01	34.2	Pass
SS-4093-070907-AD-065	Offloaded dredge material	7/9/2007	1.2	1.01	32.0	Pass
SS-4093-071007-AD-067	Offloaded dredge material	7/10/2007	1.5	1.26	51.6	Pass
SS-4093-071107-AD-070	Wet material	7/11/2007	1.2	1.01	29.5	Pass
SS-4093-071107-AD-071	Wet material	7/11/2007	1.2	1.03	34.1	Fail
SS-4093-071107-AD-072	Pre sawdust getting ready to ship	7/11/2007	1.2	1.01	34.6	Pass
SS-4093-071107-AD-073	Pre sawdust getting ready to ship	7/11/2007	1.2	0.99	30.1	Pass
SS-4093-071107-AD-074	After sawdust added	7/11/2007	1.5	1.26	57.1	Pass
SS-4093-071107-AD-075	After sawdust added	7/11/2007	1.3	1.12	33.4	Pass
SS-4093-071207-AD-077	Offloaded dredge material	7/12/2007	1.4	1.18	42.0	Pass
SS-4093-071307-AD-079	Offloaded dredge material	7/13/2007	1.3	1.10	38.4	Pass
SS-4093-071607-AD-081	Offloaded dredge material	7/16/2007	1.3	1.10	41.9	Pass
SS-4093-071707-AD-083	Offloaded dredge material	7/17/2007	1.5	1.26	58.0	Pass
SS-4093-071807-AD-085	Offloaded dredge material	7/18/2007	1.8	1.52	69.7	Pass
SS-4093-071907-AD-087	Offloaded dredge material	7/19/2007	1.2	1.01	32.7	Pass
SS-4093-072007-AD-089	Offloaded dredge material	7/20/2007	1.4	1.18	61.7	Pass
SS-4093-072107-AD-091	Wet material	7/21/2007	1.6	1.35	61.9	Pass
SS-4093-072207-AD-093	Wet material	7/22/2007	1.6	1.35	55.7	Fail
SS-4093-072307-AD-095	Wet material	7/23/2007	1.7	1.43	60.3	Fail
SS-4093-072407-AD-097	Wet material	7/24/2007	1.6	1.35	60.1	Fail
SS-4093-072507-AD-099	Wet material	7/25/2007	1.7	1.43	49.6	Fail
SS-4093-072607-AD-101	Wet material	7/26/2007	1.5	1.26	52.4	Fail
SS-4093-072707-AD-103	Wet material	7/27/2007	1.7	1.43	64.3	Fail
SS-4093-073107-AD-106	Offloaded dredge material (w sand)	7/31/2007	1.8	1.52	67.0	Fail
SS-4093-073107-AD-107	Offloaded dredge material	7/31/2007	1.6	1.35	52.2	Pass
SS-4093-080107-AD-109	Offloaded dredge material	8/1/2007	1.5	1.26	51.3	Pass
SS-4093-080207-AD-111	Offloaded dredge material	8/2/2007	1.6	1.35	51.8	Pass
SS-4093-080307-AD-113	Offloaded dredge material	8/3/2007	1.3	1.10	39.2	Fail
SS-4093-080607-AD-115	Offloaded dredge material	8/6/2007	1.6	1.35	66.1	Pass
SS-4093-080707-AD-117	Offloaded dredge material	8/7/2007	1.6	1.35	56.5	Pass
SS-4093-080807-AD-119	Wet material	8/8/2007	1.7	1.43	58.0	Pass
SS-4093-080907-AD-121	Wet material	8/9/2007	1.4	1.18	51.3	Pass
SS-4093-081007-AD-123	Offloaded dredge material	8/10/2007	1.5	1.26	46.4	Pass
SS-4093-081107-AD-125	Offloaded dredge material	8/11/2007	1.4	1.18	41.3	Pass
SS-4093-081307-AD-127	Wet material	8/13/2007	1.4	1.18	49.7	Pass
SS-4093-081407-AD-129	Wet material	8/14/2007	1.6	1.35	60.0	Pass
SS-4093-081507-AD-131	Wet material	8/15/2007	1.4	1.18	53.7	Pass
SS-4093-081607-AD-133	Offloaded dredge material	8/16/2007	1.4	1.18	47.8	Pass
SS-4093-081707-AD-135	Wet material	8/17/2007	1.4	1.18	47.4	Pass
SS-4093-082007-AD-137	Offloaded dredge material	8/20/2007	1.4	1.18	41.1	Fail
SS-4093-082107-AD-139	Wet material	8/21/2007	1.4	1.18	48.2	Pass
SS-4093-082207-AD-141	Wet material	8/22/2007	1.4	1.18	48.6	Pass
SS-4093-082307-AD-143	Wet material	8/23/2007	1.4	1.18	44.5	Pass
SS-4093-082407-CL-145	Wet material	8/24/2007	1.3	1.10	33.4	Fail
SS-4093-082707-AD-147	Wet material	8/27/2007	1.5	1.26	49.6	Pass
SS-4093-082807-CL-149	Wet material	8/28/2007	1.4	1.18	43.1	Fail
SS-4093-082907-AD-151	Wet material	8/29/2007	1.4	1.18	56.2	Fail
SS-4093-083007-AD-153	Wet material	8/30/2007	1.4	1.18	49.6	Fail
SS-4093-083107-AD-155	Wet material	8/31/2007	1.4	1.18	44.7	Pass
SS-4093-090507-AD-157	wet material/offloaded material	9/5/2007	1.5	1.26	51.0	Fail
SS-4093-090607-AD-158	Material remaining on pad/offloaded	9/6/2007	1.5	1.26	52.7	Fail
		Average	1.4	1.20	47.7	
		Minimum	1.1767	0.99	28.3	
		Maximum	1.8	1.52	69.7	