MEMO

To: Steven Scharf, P.E., NYSDEC Katy Murphy, NYSDEC Renata Ockerby, NYSDOH Julia Schneider, Cashin Spinelli & Ferretti, LLC Scott Krall, Bayer David Paule, Bayer John Brussel, P.E., ARCADIS

David Kingsley, ARCADIS Gregory McDermott, ARCADIS Charles Atanasio, ARCADIS Michael Perciballi, Posillico Lee Kaplan, Posillico Chris Hurst, Posillico Marc Atamian, Posillico

From: Andrew Enigk, ARCADIS

Date: April 22, 2015 ARCADIS Project No.: B0032305.2013

Subject: Bayer MaterialScience LLC 125 New South Road, Hicksville, New York Phase 2 Operable Unit 4 Remedial Activities Progress Report #23 (April 13, 2015 – April 17, 2015)

This memorandum summarizes work performed from April 13, 2015 through April 17, 2015 in connection with the Phase 2 Operable Unit 4 (OU4) remedial activities at the above-referenced Site. The remedial activities are being implemented by Bayer MaterialScience LLC's (Bayer's) remedial contractor (Posillico) with onsite construction/engineering oversight provided by ARCADIS. The work activities during the reporting period were as observed by Charles Atanasio, Mike Briscoe, and Sal Tedesco of ARCADIS.

SAFETY/SAFE WORK PRACTICES

Posillico indicated that no incidents have occurred this week and that work has proceeded safely (with no injuries over the 109 days of work completed project-to-date).

COMPLETED WORK / WORK-IN-PROGRESS

Work activities performed by Posillico and its subcontractors during this period consisted of the following:

• Continuing to perform post-backfill and soil cover system topographic survey activities.

ARCADIS of New York, Inc. 6723 Towpath Road P O Box 66 Syracuse New York 13214-0066 Tel 315 446 9120 Fax 315 449 4111

- Collecting samples to characterize an additional 2,000 cubic yards (CY) of general fill (run-of-bank sand/gravel) from the offsite clean fill source (Beth Moses Cemetery [BMC] located in West Babylon, New York) on April 10, 2015. Posillico collected two sample sets (each set representing 1,000 CY of backfill) with each set including one composite sample for semi-volatile organic compounds (SVOCs), inorganics, polychlorinated biphenyls (PCBs), and pesticides, and two discrete samples for volatile organic compounds (VOCs) in accordance with the sampling requirements in Table 5.4(e)10 of the New York State Department of Environmental Conservation (NYSDEC) document titled, "DER-10 Technical Guidance for Site Investigation and Remediation" (DER-10). Posillico submitted the fill samples to York Analytical Laboratories, Inc. for analysis. These new samples and previous samples provide characterization data for up to 33,000 CY of general fill. Based on review of the analytical results which met project criteria, ARCADIS provided approval to Posillico to import the additional material.
- Collecting samples to characterize an additional 4,000 CY of topsoil from the offsite topsoil source (Pinelawn Cemetery located in Farmingdale, New York) on April 15, 2015. Posillico collected four sample sets (each set representing 1,000 CY of topsoil) with each set including one composite sample for SVOCs, inorganics, PCBs, and pesticides, and total organic carbon (TOC), and two discrete samples for VOCs in accordance with the sampling requirements in Table 5.4(e)10 of DER-10. ARCADIS observed the sampling activities at the fill source. Posillico submitted the fill samples to York Analytical Laboratories, Inc. for analysis. These new samples and previous samples provide characterization data for up to 8,000 CY of topsoil. Analytical results for these additional topsoil samples are pending.
- Continuing to backfill open Phase 2 OU4 excavation areas using approximately 496 CY of imported clean backfill from BMC. The imported clean backfill was placed in approximately one-foot loose lifts and compacted. In-place compaction testing was performed on each lift at a minimum frequency of one sample per 2,500 square feet (SF), as required by the *Remedial Design Addendum* (ARCADIS, August 2014)(RDA), by Posillico's compaction testing subcontractor, MT Group.
- Continuing installation of the site-wide soil cover system and demarcation layer below the system as follows:
 - Approximately 1,500 CY of imported clean backfill from BMC were placed and compacted during this reporting period to establish the 8-inch base of the soil cover system. Compaction testing was performed in accordance with the RDA, by MT Group. Approximately 61% of the 8-inch cap base had been completed by the end of this reporting period.
 - Approximately 600 CY of imported topsoil from Pinelawn Cemetery (PC) located in Farmingdale, New York were placed during this reporting period to establish the 4-inch top layer of the soil

cover system. Approximately 8% of the soil cover system topsoil placement had been completed by the end of this reporting period.

- Continuing washing of truck tires before the trucks exit the site each trip and cleaning of the street with a street sweeper every night after work activities are complete for the day.
- Continuing erosion/sedimentation control measures inspection, maintenance, and documentation.
- Disconnecting power to the Site on April 15, 2015.

PROPOSED WORK ACTIVITIES

Posillico's two-week "look ahead" schedule is included as Attachment A and summarized below:

- Collect additional samples of the imported clean general fill and/or topsoil as needed beyond what has
 previously been pre-characterized to complete the work activities at the Site.
- Continue importing general fill and topsoil.
- Continue backfilling excavations and conducting in-place compaction testing.
- Install erosion control matting along the side slopes of the rainwater runoff sumps after placement of topsoil.
- Continue installation of the site-wide soil cover system.
- Collect samples of the drummed sediment removed from the frac tanks and transport the drums offsite for disposal.
- Coordinate removal of the utility poles at the Site.
- Continue tire washing and street cleaning.
- Continue erosion and sedimentation control measures inspection, maintenance, and documentation.

ATTACHMENTS

- Attachment A: Posillico's Two-Week "Look Ahead" Schedule
- Attachment B: Weekly Site Photos
- Attachment C: Excavation/Backfilling Progress Table

- Attachment D: Excavation/Backfilling Progress Figure
- Attachment E: Soil Cover System Progress Figure

Upon receipt of this memorandum, please notify Mr. Andrew Enigk of ARCADIS at 315.671.9548 within 5 days if you believe that any portion of this summary does not accurately reflect work performed during the reporting period or if additional items should be recorded in this summary. If modifications are made, a revised memorandum will be distributed.

Attachment A

Two-Week Look Ahead Schedule

	PROJECT : Bayer-Hicksvil DATE/TIME: 4/17/2015	le																JOB #: 07042 BY:	Chris Hurst
	Activity Description & Location	LABOR	OPER		Week of: M T W 7					Week of: M T W			04/27/15 T F		/15	EQUIPMENT/MATERIALS NEEDED	PROD RATE PER SHIFT PLAN		
	Survey	I	1	0	X	-	x	-	x			x	_	x	-		NEEDED	1 12/ 11 (
	import backfill material		-					x	x			x					excavator		
	Import topsoil				х	x	x	Х	x			x					payloader		
	topsoil sumps install erosion blankets				x												John Deere 850 DZ. dirt roller		
	Install Site wide Cap- Fill and topsoil	3	2			x	x	X	x		x	x	x	x	x	\neg			
	MTGroup - Compaction testing			1				х	х		х	х							
	HTC landscape/ hydro seed							х	х			х	х	x	х				
R																			
SUBCONTRACTOR																			
TRA																			
NO																			
JBC																			
SI																			
PLAN B WORK																			
B																			
LA																			
٦																			

Ger	neral Issues / Change Orders	Ball In Court
1		
2		
3		

Attachment B

Weekly Site Photos

Weekly Progress Report #23 (April 13, 2015 - April 17, 2015)

Weekly Site Photos



Posillico performing installation of 8-inch soil base of cap.



Posillico washing truck tires before leaving the Site.

Page:

Weekly Progress Report #23 (April 13, 2015 - April 17, 2015)

Weekly Site Photos



Posillico performing compaction of 8-inch soil base of cap (southeast corner of Site).



Posillico moving backfill to Sump #4 located in the southeast corner of the Site.

Weekly Progress Report #23 (April 13, 2015 – April 17, 2015)

Weekly Site Photos



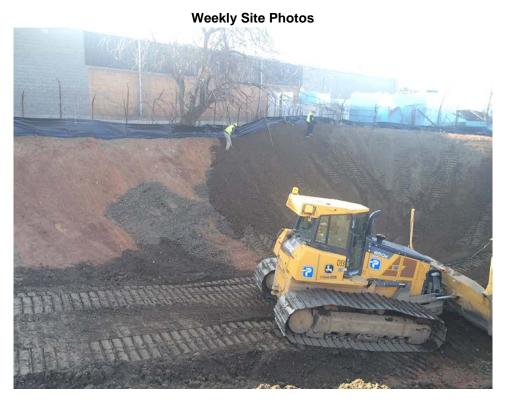
Posillico stockpiling topsoil for the sumps located in the southern corner of the Site.



Posillico grading topsoil on eastern side of the Site.

Page:

Weekly Progress Report #23 (April 13, 2015 - April 17, 2015)



Posillico grading backfill material in Sump #4.



Posillico performing street sweeping at the end of a work day.

Attachment C

Excavation/Backfilling Progress Table

TABLE 1 EXCAVATION AND BACKFILL TRACKING UPDATED THROUGH APRIL 17, 2015

PHASE 2 OPERABLE UNIT 4 REMEDIAL ACTION BAYER MATERIALSCIENCE LLC 125 NEW SOUTH ROAD HICKSVILLE, NEW YORK

		Estim				
Operation	Design Volume (CY)	Previous Totals	Current Week Totals	Total to Date	Remaining Volume	Percent Completed
Excavation						
"A" Group Excavation Areas						
PCB-Impacted Soil (>50ppm)	167	167	0	167	0	100%
Non-Hazardous Waste Soil	201	201	0	201	0	100%
Subtotal:	368	368	0	368	0	100%
"B" Group Excavation Areas						
PCB-Impacted Soil (>50ppm)	218	218	0	218	0	100%
Non-Hazardous Waste Soil	183	183	0	183	0	100%
Subtotal:	401	401	0	401	0	100%
"C" Group Excavation Areas		•				
PCB-Impacted Soil (>50ppm)	227	227	0	227	0	100%
Non-Hazardous Waste Soil	5,538	5,538	0	5,538	0	100%
Concrete	400	0	0	0	400	0%
Subtotal:	6,165	5,765	0	5,765	400	94%
PCB-Impacted Soil (>50ppm) Subtotal:	612	612	0	612	0	100%
Non-Hazardous Waste Soil Subtotal:	5,922	5,922	0	5,922	0	100%
Total:	6,534	6,534	0	6,534	0	100%
Backfill						
Run-of-Bank Gravel						
Phase 1 "A" Group Excavation Areas	5,327	4,554	295	4,849	478	91%
Phase 1 "B" Group Excavation Areas	1,384	1,268	58	1,326	58	96%
Phase 2 "A" Group Excavation Areas	368	276	45	321	47	87%
Phase 2 "B" Group Excavation Areas	401	401	0	401	0	100%
Phase 2 "C" Group Excavation Areas	5,765	5,065	98	5,163	602	90%
Soil Cover System	18,200	9,530	1,500	11,030	7,170	61%
Subtotal:	31,445	20,694	1,996	22,690	8,355	72%
Topsoil		•		•	•	
Soil Cover System	7,192	0	600	600	6,592	8%
Total:	38,637	11,759	2,596	23,290	14,947	60%

Notes:

1. Excavation and backfill volumes are estimates based on field observations and measurements.

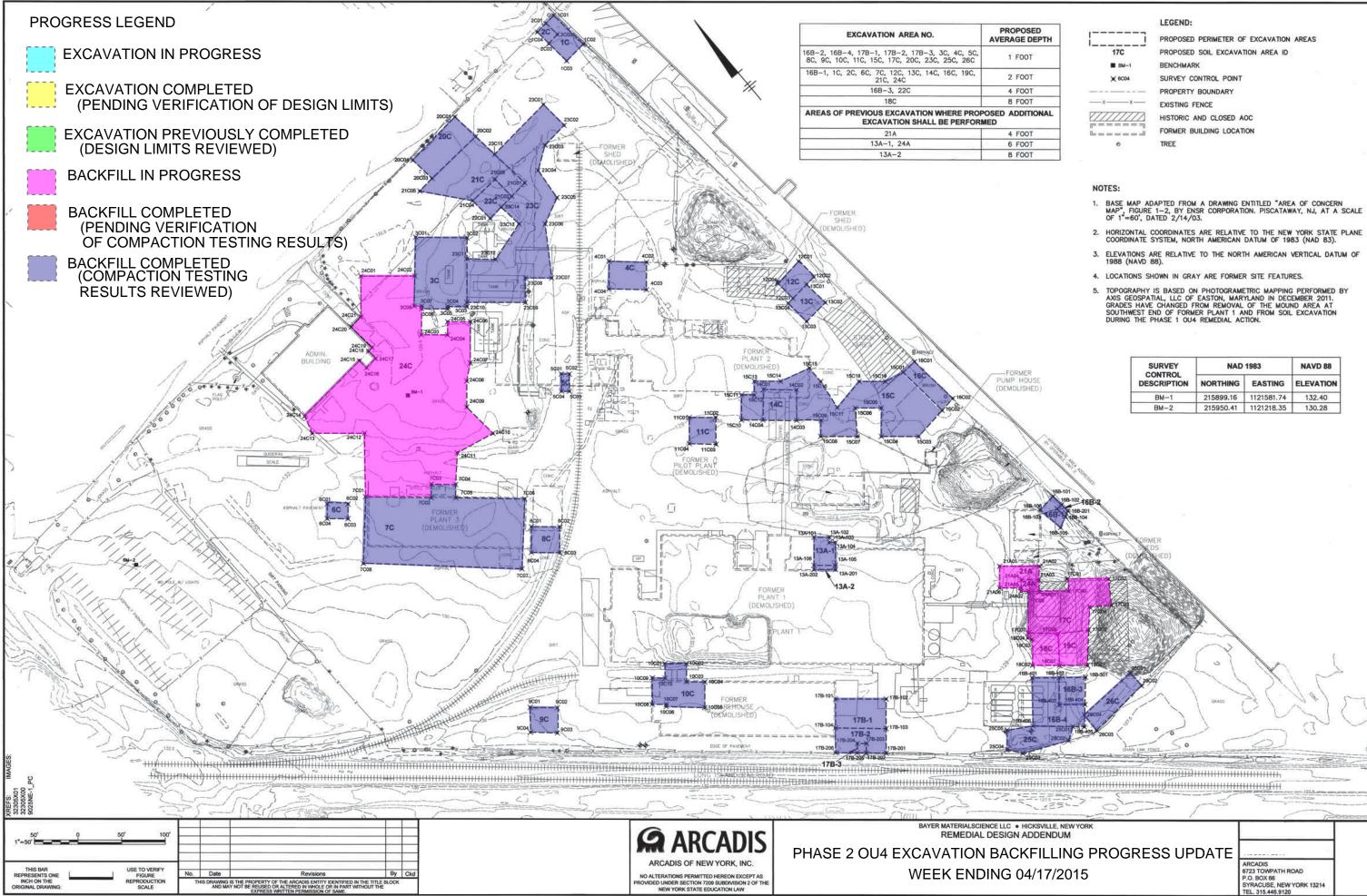
2. CY = Cubic Yards.

3. PCB = polychlorinated biphenyls

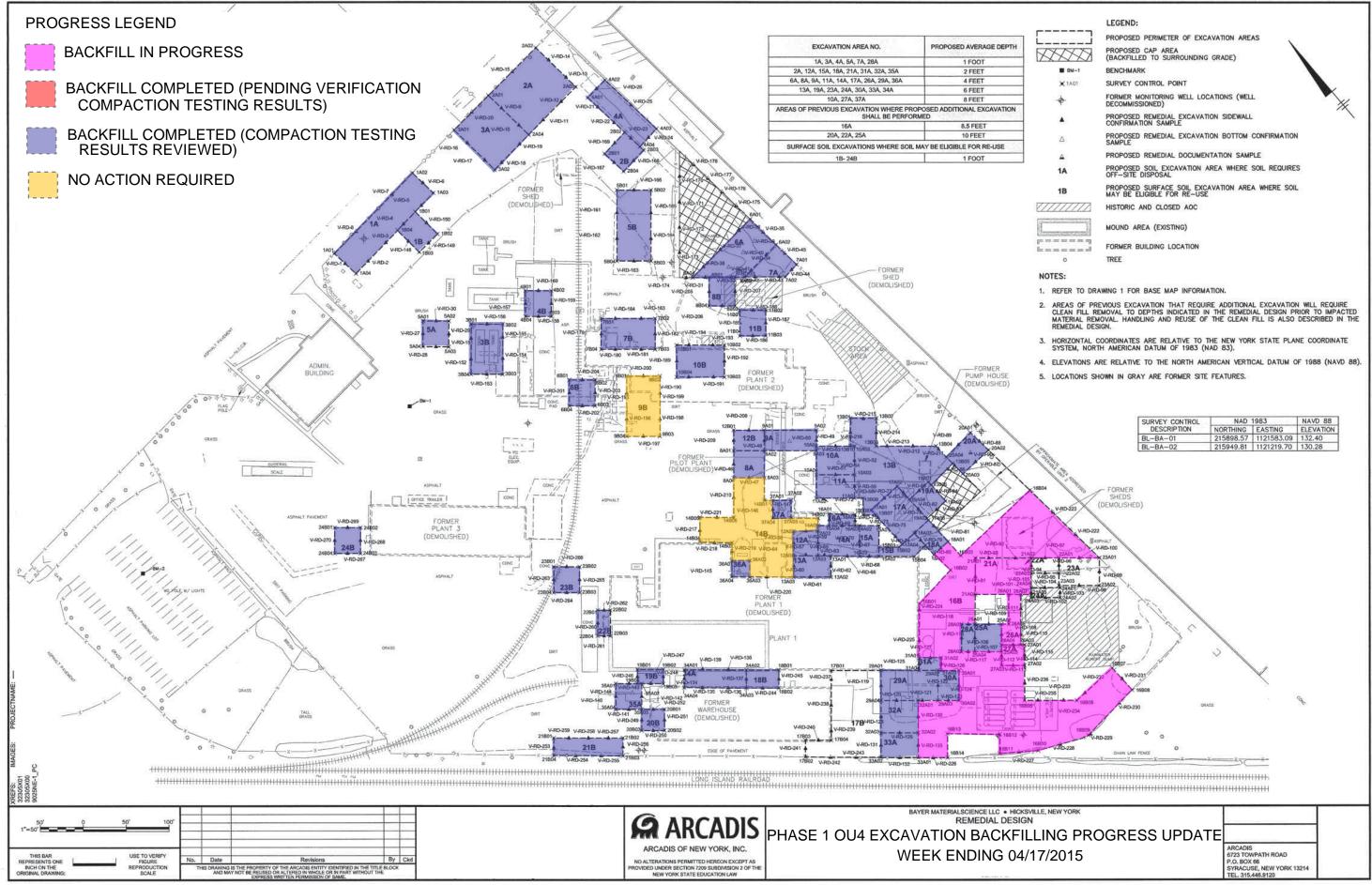
4. ppm = parts per million

Attachment D

Excavation/Backfilling Progress Figure



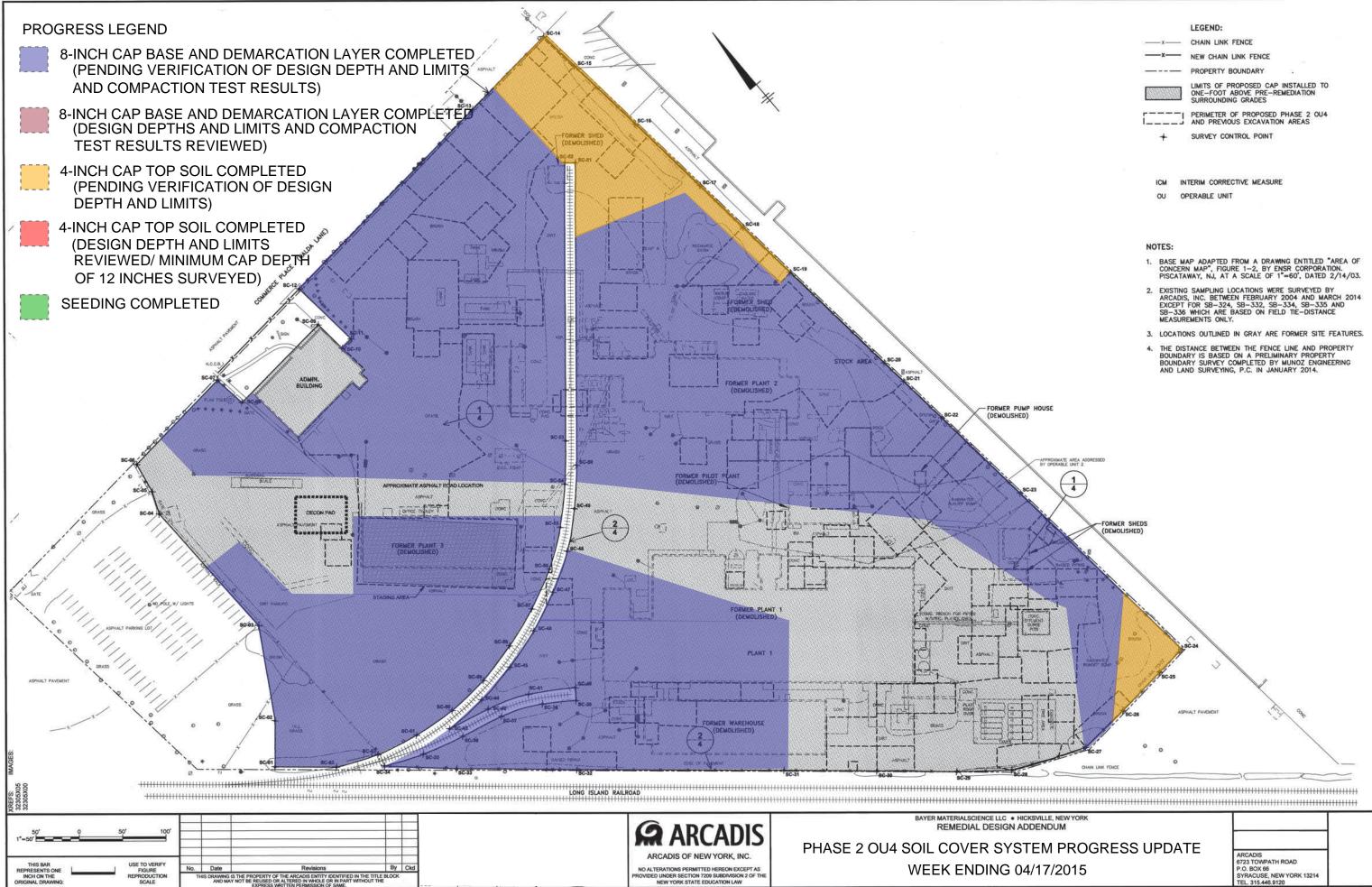
	SURVEY	NAD	1983	NAVD 88	
	CONTROL	NORTHING	EASTING	ELEVATION	
	BM-1	215899.16	1121581.74	132.40	
	BM-2	215950.41	1121218.35	130.28	
101 102 102 108-102 108-201 100-201 100-201 100-201 100-201 100-201 100-201 100-201 100-201 10	ORMER SEDS DY ST. HED)				
28C03				2 C / C	
16B-3 163-404 26C 26C 26C 26C 26C 26C 26C 26C 26C 26C	N LINK TONE	ORASS		Loo Contraction of the second se	
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168-30 168-401 2600 2000 2000 2000 2000 2000 2000 20					
6B-3 99-804 100-805 100-805 26C 26C 26C 26C 26C 26C 26C 26C		DATE			



	LEOFND.
	LEGEND:
L	PROPOSED PERIMETER OF EXCAVATION AREAS
KXXXX	PROPOSED CAP AREA (BACKFILLED TO SURROUNDING GRADE)
BM-1	BENCHMARK
× 1A01	SURVEY CONTROL POINT
+	FORMER MONITORING WELL LOCATIONS (WELL DECOMMISSIONED)
	PROPOSED REMEDIAL EXCAVATION SIDEWALL CONFIRMATION SAMPLE
Δ	PROPOSED REMEDIAL EXCAVATION BOTTOM CONFIRMATION SAMPLE
A	PROPOSED REMEDIAL DOCUMENTATION SAMPLE
1A	PROPOSED SOIL EXCAVATION AREA WHERE SOIL REQUIRES OFF-SITE DISPOSAL
1B	PROPOSED SURFACE SOIL EXCAVATION AREA WHERE SOIL MAY BE ELIGIBLE FOR RE-USE
1111111	HISTORIC AND CLOSED AOC
1	MOUND AREA (EXISTING)
	FORMER BUILDING LOCATION
Ø	TREE

Attachment E

Soil Cover System Progress Figure





x	CHAIN LINK FENCE
—x—	NEW CHAIN LINK FENCE
	PROPERTY BOUNDARY .
	LIMITS OF PROPOSED CAP INSTALLED TO ONE-FOOT ABOVE PRE-REMEDIATION SURROUNDING GRADES
[]	PERIMETER OF PROPOSED PHASE 2 OU4 AND PREVIOUS EXCAVATION AREAS
+	SURVEY CONTROL POINT