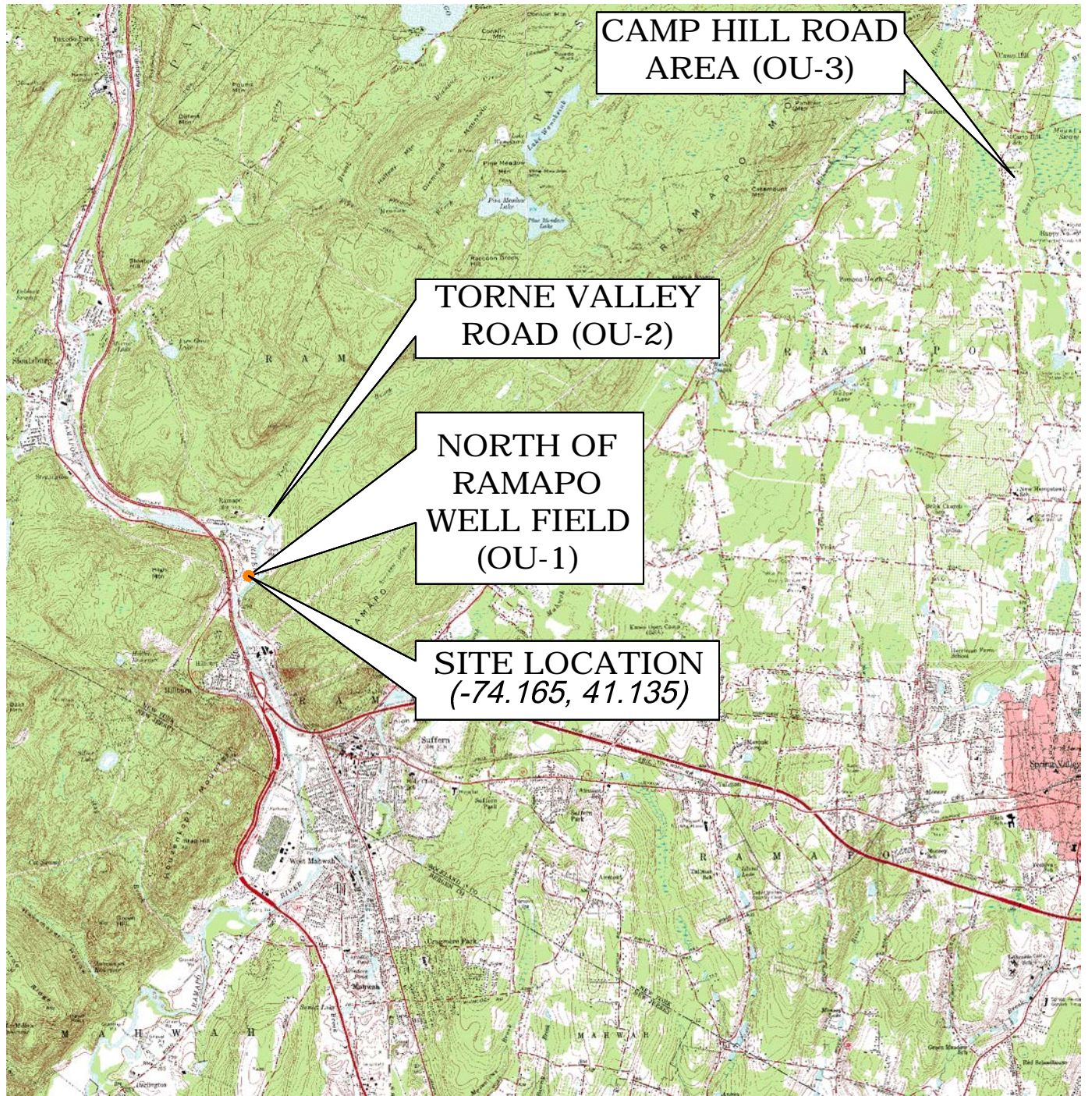


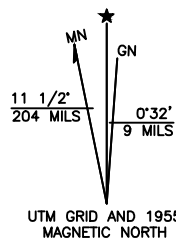
CITY: MAHWAH DIV: GROUP: ENV: CAD DB: JG LD: (Ort) PIC: (Ort) PM: (Recept) TM: (Ort) LYR: (Ort) ON: *OFF-REF*
 G:\ENV\CAD\Fairfax\mact\100006020005000032014-03\IRM REPORT\FIG01-SITE LOCATION MAP.dwg LAYOUT: 1 SAVED: 3/3/2014 10:20 AM ACADVER: 18.1S (LMS TECH) PAGES: 1 PLOTSETUP: PLOTTED: 3/3/2014 1:04 PM BY: GONZALEZ, JAMES



CONTOUR INTERVAL 10 FEET
 NATIONAL GEODETIC VERTICAL DATUM OF 1929



SOURCE: USGS 7.5 MIN. SLOATSBURG QUADRANGLE, SLOATSBURG, NY-NJ. 1952, PARK RIDGE QUADRANGLE, PARK RIDGE, NJ-NY, 1955, RAMSEY QUADRANGLE, RAMSEY, NJ-NY, 1955, THIELS QUADRANGLE, THIELS, NJ-NY, 1955



CAMP HILL ROAD
 AREA (OU-3)

TORNE VALLEY
 ROAD (OU-2)

NORTH OF
 RAMAPO
 WELL FIELD
 (OU-1)

SITE LOCATION
 (-74.165, 41.135)

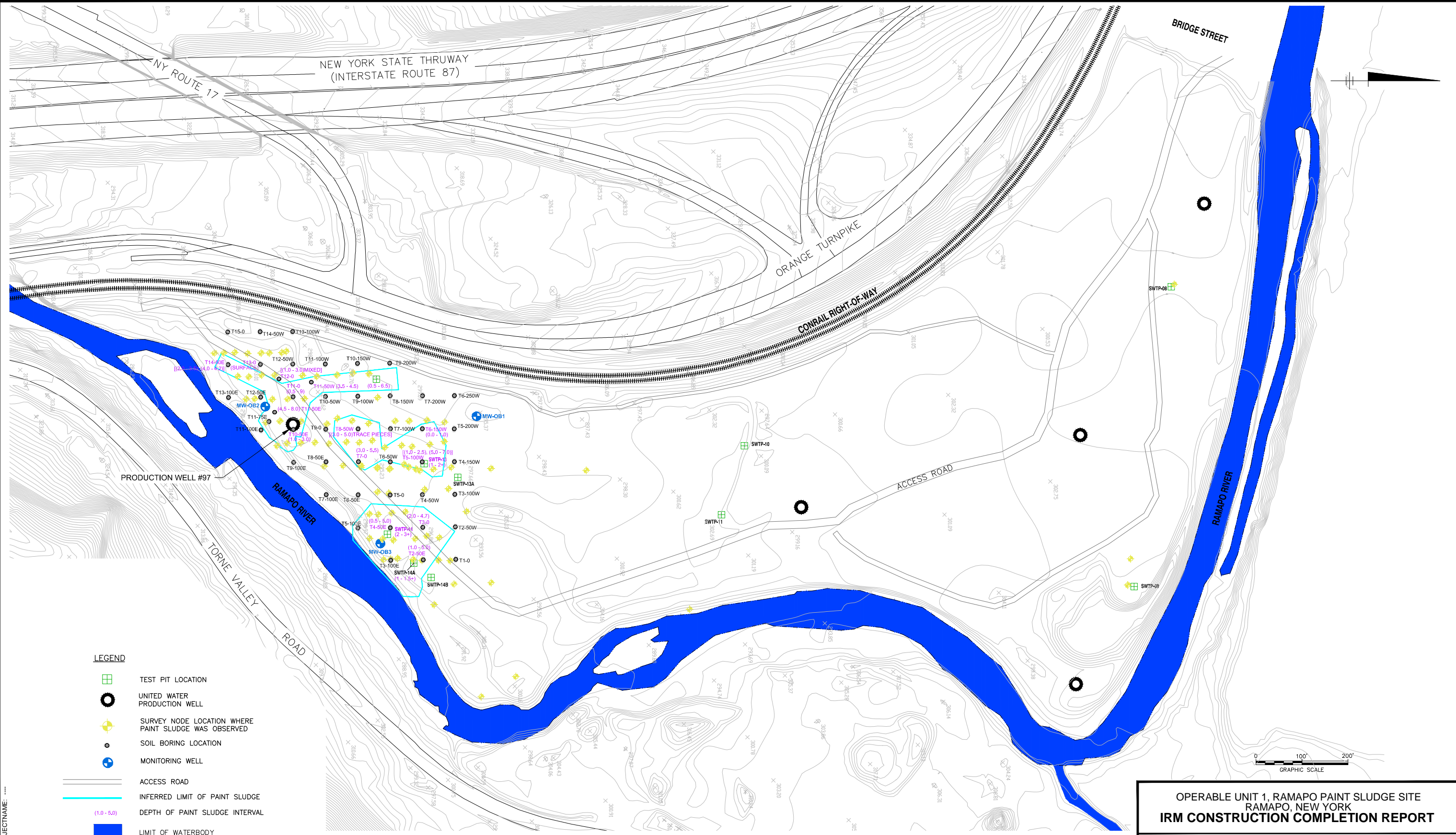
OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
 RAMAPO, NEW YORK
 IRM CONSTRUCTION COMPLETION REPORT

SITE LOCATION MAP



FIGURE
 1

CITY:FAIRLAWN-NJ DIV:GROUP:ENV/CAD DBG:STEINBERGER LDJ:GONZALEZ PIC:RELLIS PM:E.ZIMMERMAN TM:JROCKLIN LY:RON+OFF+REF+
 G:\ENV\CAD\FAIRLAWN\ACT\N\0006020005\000032014-03\IRM REPORT\FIG03-HISTORICAL SOIL INVESTIGATION.dwg LAYOUT: 3 SAVED: 5/12/2014 11:13:13 AM ACADVER: 18.1S (LMS TECH) PAGES: 18 PLOTTED: 5/12/2014 11:14 AM BY: GONZALEZ, JAMES

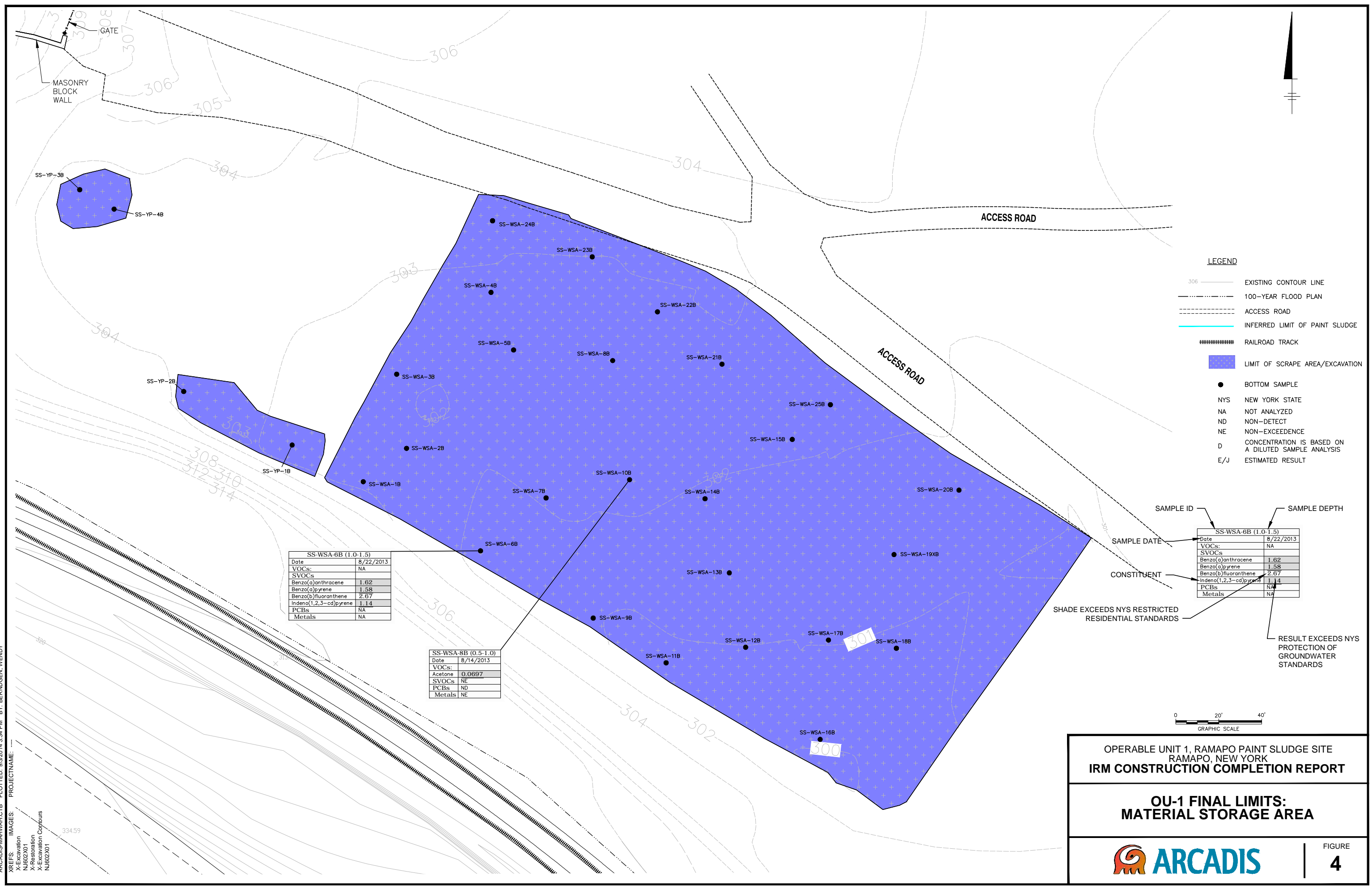


OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
 RAMAPO, NEW YORK
 IRM CONSTRUCTION COMPLETION REPORT

HISTORICAL SOIL INVESTIGATION

 **ARCADIS**

CITY: FAIRLAWN, NJ DIV: GROUP: ENV/CAD DB: G. STEINBERGER LD: J. GONZALEZ PIC: R. ELLIS PM: E. ZIMMERMAN TM: J. ROCKLIN LYRON: OFF=REF= V:\ARCADIS\US.com\office\data\Fairlawr\NJ\ENV\CAD\Fairlawr\ACT\10000602\0005\0003\2014-03\IRM REPORT\FIG04-OU-1 FINAL LIMITS_MATERIAL STORAGE AREA.dwg LAYOUT: 4. SAVED: 5/15/2014 3:15 PM ACADVER: 18.1S (LMS TECH) PAGES: 4. PLOTSTYLETABLE: ARCADIS-MAHWAH\CTB PLOTTED: 9/2/2014 3:34 PM BY: BERNDGEN, WENDY



- LEGEND**
- 306 ——— EXISTING CONTOUR LINE
 - 100-YEAR FLOOD PLAN
 - ACCESS ROAD
 - INFERRED LIMIT OF PAINT SLUDGE
 - ||||| RAILROAD TRACK
 - LIMIT OF SCRAPE AREA/EXCAVATION
 - BOTTOM SAMPLE
 - NYS NEW YORK STATE
 - NA NOT ANALYZED
 - ND NON-DETECT
 - NE NON-EXCEEDENCE
 - D CONCENTRATION IS BASED ON A DILUTED SAMPLE ANALYSIS
 - E/J ESTIMATED RESULT

SS-WA-6B (1.0-1.5)	
Date	8/22/2013
VOCs	NA
SVOCS	
Benzo(a)anthracene	1.62
Benzo(a)pyrene	1.58
Benzo(b)fluoranthene	2.67
Indeno(1,2,3-cd)pyrene	1.14
PCBs	NA
Metals	NA

SS-WA-8B (0.5-1.0)	
Date	8/14/2013
VOCs	
Acetone	0.0697
SVOCS	NE
PCBs	ND
Metals	NE

SAMPLE ID	SAMPLE DATE	SAMPLE DEPTH	CONSTITUENT
SS-WA-6B (1.0-1.5)	8/22/2013		VOCs: NA
			Benzo(a)anthracene 1.62
			Benzo(a)pyrene 1.58
			Benzo(b)fluoranthene 2.67
			Indeno(1,2,3-cd)pyrene 1.14
			PCBs NA
			Metals NA

SHADE EXCEEDS NYS RESTRICTED RESIDENTIAL STANDARDS

RESULT EXCEEDS NYS PROTECTION OF GROUNDWATER STANDARDS

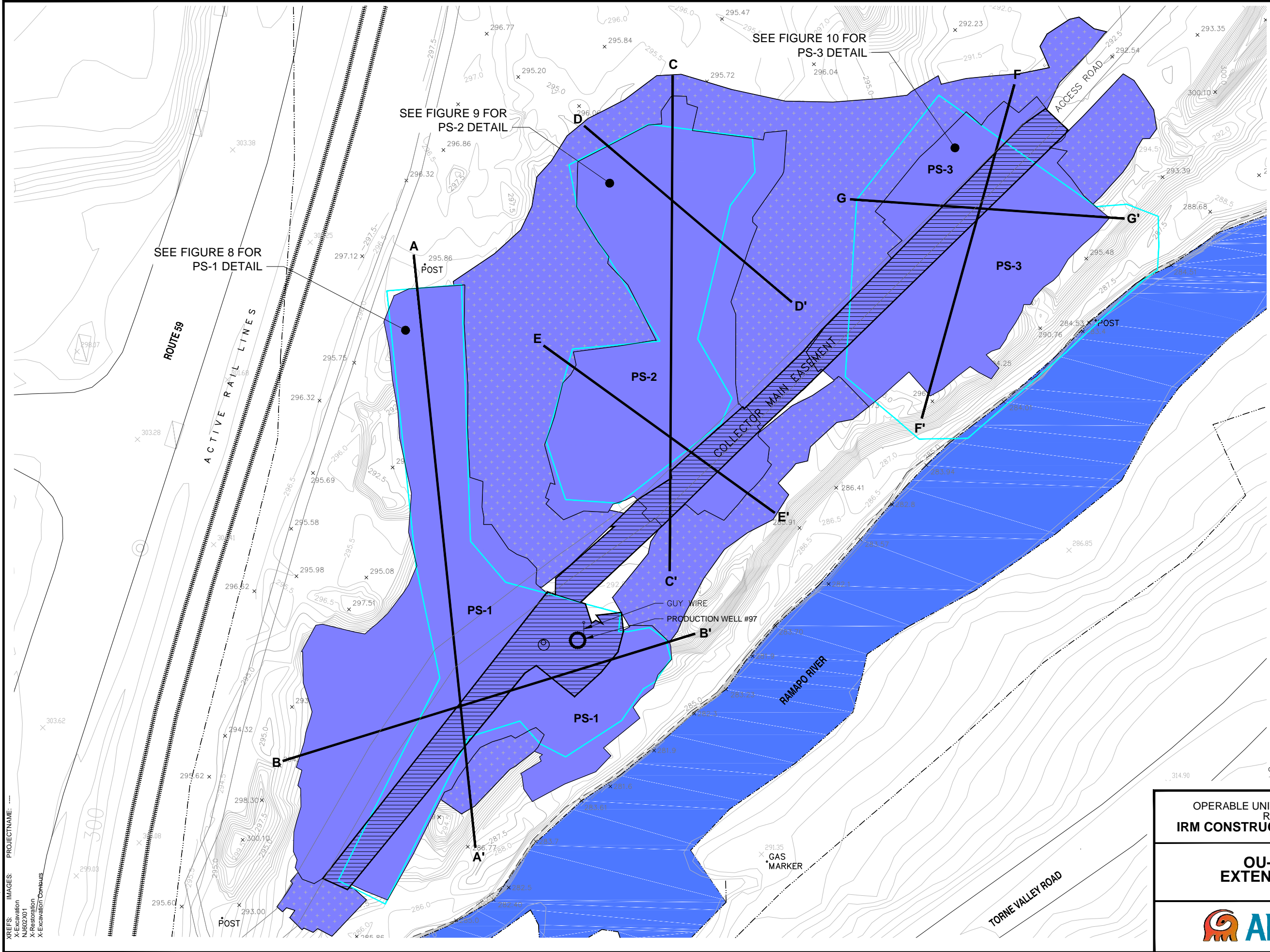


OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
RAMAPO, NEW YORK
IRM CONSTRUCTION COMPLETION REPORT

**OU-1 FINAL LIMITS:
MATERIAL STORAGE AREA**

FIGURE 4

AREFS: IMAGES PROJECTNAME: X-Excavation N0602001 X-Restoration X-Excavation Contours N0602001 334.59



LEGEND

- x 294.31 EXISTING SPOT ELEVATION
- 296.0 — EXISTING CONTOUR LINE
- - - - - 100-YEAR FLOOD PLAN
- UNITED WATER PRODUCTION WELL
- ACCESS ROAD
- INFERRED LIMIT OF PAINT SLUDGE
- A — A' TRANSACTION LINE
- ||||| RAILROAD TRACK
- LIMIT OF EXCAVATION
- ▨ LIMIT OF EXCAVATION WITHIN THE UTILITY EASEMENT
- LIMIT OF SURFACE SCRAPE
- LIMIT OF WATERBODY

NOTE:

REFER TO FIGURE 5A AND 5B FOR CROSS SECTIONS.

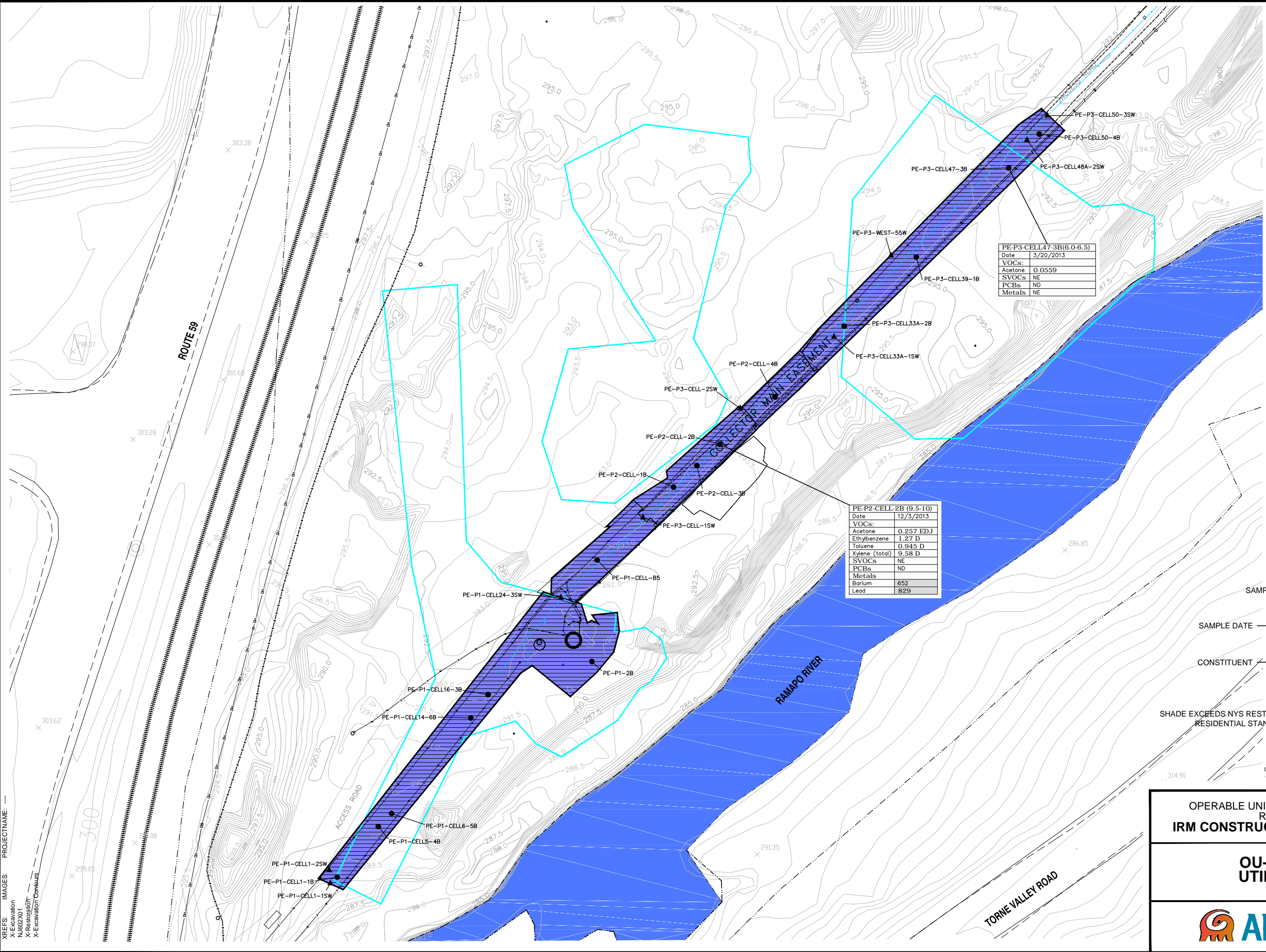
OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
RAMAPO, NEW YORK
IRM CONSTRUCTION COMPLETION REPORT

**OU-1 FINAL LIMITS:
EXTENT OF EXCAVATION**

ARCADIS

FIGURE **5**

AREFS: IMAGES PROJECTNAME: ...
 X-Excavation
 X-Restoration
 X-Excavation Contours



PE-P3-CELL47-3B(6.0-6.5)	
Date	3/20/2013
VOCs:	
Acetone	0.0559
SVOCS	NE
PCBs	ND
Metals	NE

PE-P2-CELL-2B (9.5-10)	
Date	12/3/2013
VOCs:	
Acetone	0.257 EDJ
Ethylbenzene	1.27 D
Toluene	0.945 D
Xylene (total)	9.58 D
SVOCS	NE
PCBs	ND
Metals	
Borium	652
Lead	829

- LEGEND**
- EXISTING CONTOUR LINE
 - - - 100-YEAR FLOOD PLAN
 - UNITED WATER PRODUCTION WELL
 - ACCESS ROAD
 - INFERRED LIMIT OF PAINT SLUDGE
 - |||| RAILROAD TRACK
 - ▨ LIMIT OF EXCAVATION WITHIN THE UTILITY EASEMENT
 - LIMIT OF WATERBODY
 - BOTTOM SAMPLE
 - ▲ SIDEWALL SAMPLE
 - NYS NEW YORK STATE
 - ND NON-DETECT
 - NE NON-EXCEEDENCE
 - D CONCENTRATION IS BASED ON A DILUTED SAMPLE ANALYSIS
 - E/J ESTIMATED RESULT

SAMPLE ID	
PE-P2-CELL-2B (9.5-10)	
SAMPLE DATE	
Date	12/3/2013
CONSTITUENT	
VOCs:	
Acetone	0.257 EDJ
Ethylbenzene	1.27 D
Toluene	0.945 D
Xylene (total)	9.58 D
SVOCS	NE
PCBs	ND
Metals	
Borium	652
Lead	829

SHADE EXCEEDS NYS RESTRICTED RESIDENTIAL STANDARDS

RESULT EXCEEDS NYS PROTECTION OF GROUNDWATER STANDARDS



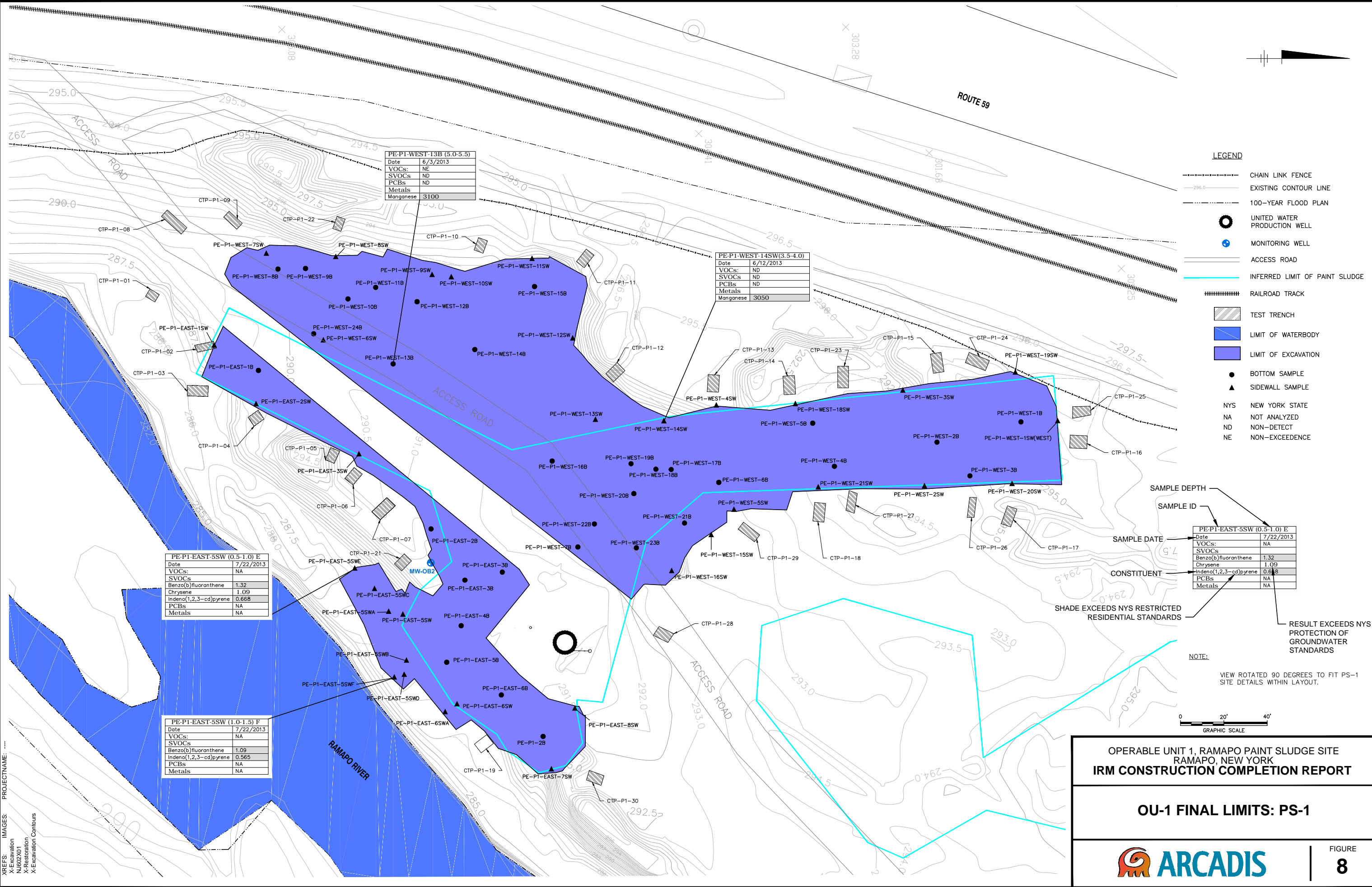
**OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
 RAMAPO, NEW YORK
 IRM CONSTRUCTION COMPLETION REPORT**

**OU-1 FINAL LIMITS:
 UTILITY CORRIDOR**

ARCADIS

FIGURE
7

CITY:FAIRLAWN,NJ DIV:GROUP:ENV/CAD DBG:STEINBERGER LDJ:GONZALEZ PIC:R:ELLIS P:ME:ZIMMERMAN TM:J:ROCKLIN LY:RON:OFF:REF:
 \\\ARCADIS\485\com\office\data\Fairlawr\NJ\ENV\CAD\Fairlawr\OU1\IRM REPORT\FIG08-OU1 FINAL LIMITS_PS-1.dwg LAYOUT: 8 SAVED: 9/2/2014 4:07 PM ACADVER: 18.1S (LMS TECH) PAGES: 18 PLOTTED: 9/3/2014
 XREFS: IMAGES: PROJECTNAME: X-Excavation X-Restoration X-Excavation Contours



PE-P1-WEST-13B (5.0-5.5)	
Date	6/3/2013
VOCs	NE
SVOCs	ND
PCBs	ND
Metals	
Manganese	3100

PE-P1-WEST-14SW(3.5-4.0)	
Date	6/12/2013
VOCs	ND
SVOCs	ND
PCBs	ND
Metals	
Manganese	3050

PE-P1-EAST-5SW (0.5-1.0) E	
Date	7/22/2013
VOCs	NA
SVOCs	
Benzo(b)fluoranthene	1.32
Chrysene	1.09
Indeno(1,2,3-cd)pyrene	0.668
PCBs	NA
Metals	NA

PE-P1-EAST-5SW (1.0-1.5) F	
Date	7/22/2013
VOCs	NA
SVOCs	
Benzo(b)fluoranthene	1.09
Indeno(1,2,3-cd)pyrene	0.565
PCBs	NA
Metals	NA

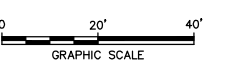
- LEGEND**
- CHAIN LINK FENCE
 - EXISTING CONTOUR LINE
 - 100-YEAR FLOOD PLAN
 - UNITED WATER PRODUCTION WELL
 - MONITORING WELL
 - ACCESS ROAD
 - INFERRED LIMIT OF PAINT SLUDGE
 - ||||| RAILROAD TRACK
 - ▨ TEST TRENCH
 - LIMIT OF WATERBODY
 - LIMIT OF EXCAVATION
 - BOTTOM SAMPLE
 - ▲ SIDEWALL SAMPLE
 - NYS NEW YORK STATE
 - NA NOT ANALYZED
 - ND NON-DETECT
 - NE NON-EXCEEDENCE

NOTE:
VIEW ROTATED 90 DEGREES TO FIT PS-1 SITE DETAILS WITHIN LAYOUT.

SAMPLE ID	
PE-P1-EAST-5SW (0.5-1.0) E	
Date	7/22/2013
VOCs	NA
SVOCs	
Benzo(b)fluoranthene	1.32
Chrysene	1.09
Indeno(1,2,3-cd)pyrene	0.668
PCBs	NA
Metals	NA

SHADE EXCEEDS NYS RESTRICTED RESIDENTIAL STANDARDS

RESULT EXCEEDS NYS PROTECTION OF GROUNDWATER STANDARDS

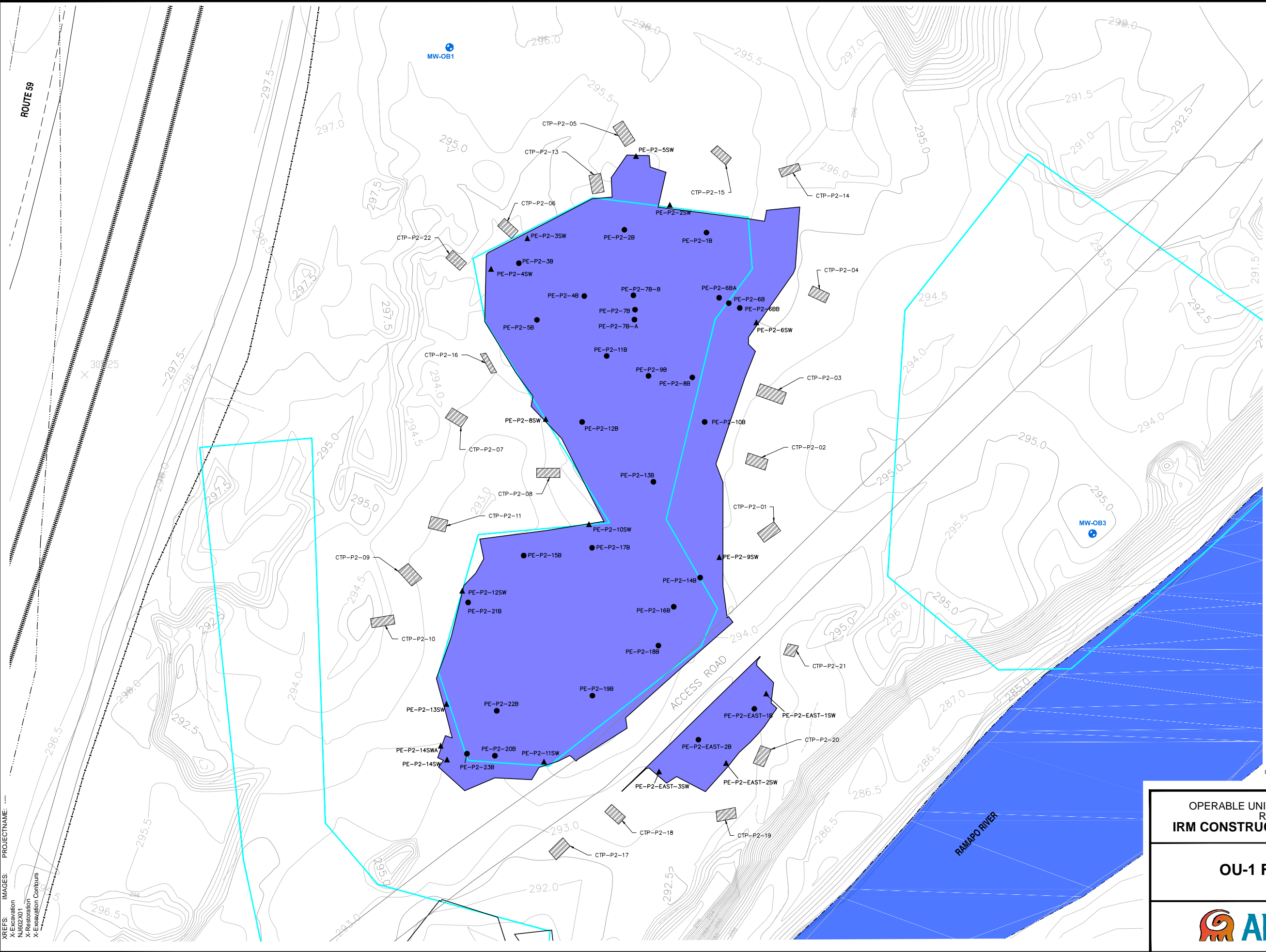


**OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
 RAMAPO, NEW YORK
 IRM CONSTRUCTION COMPLETION REPORT**

OU-1 FINAL LIMITS: PS-1

ARCADIS

FIGURE
8



N

LEGEND

- CHAIN LINK FENCE
- EXISTING CONTOUR LINE
- 100-YEAR FLOOD PLAN
- MONITORING WELL
- ACCESS ROAD
- INFERRED LIMIT OF PAINT SLUDGE
- ||||| RAILROAD TRACK
- ▨ TEST TRENCH
- LIMIT OF WATERBODY
- LIMIT OF EXCAVATION
- BOTTOM SAMPLE
- ▲ SIDEWALL SAMPLE

0 20' 40'
GRAPHIC SCALE

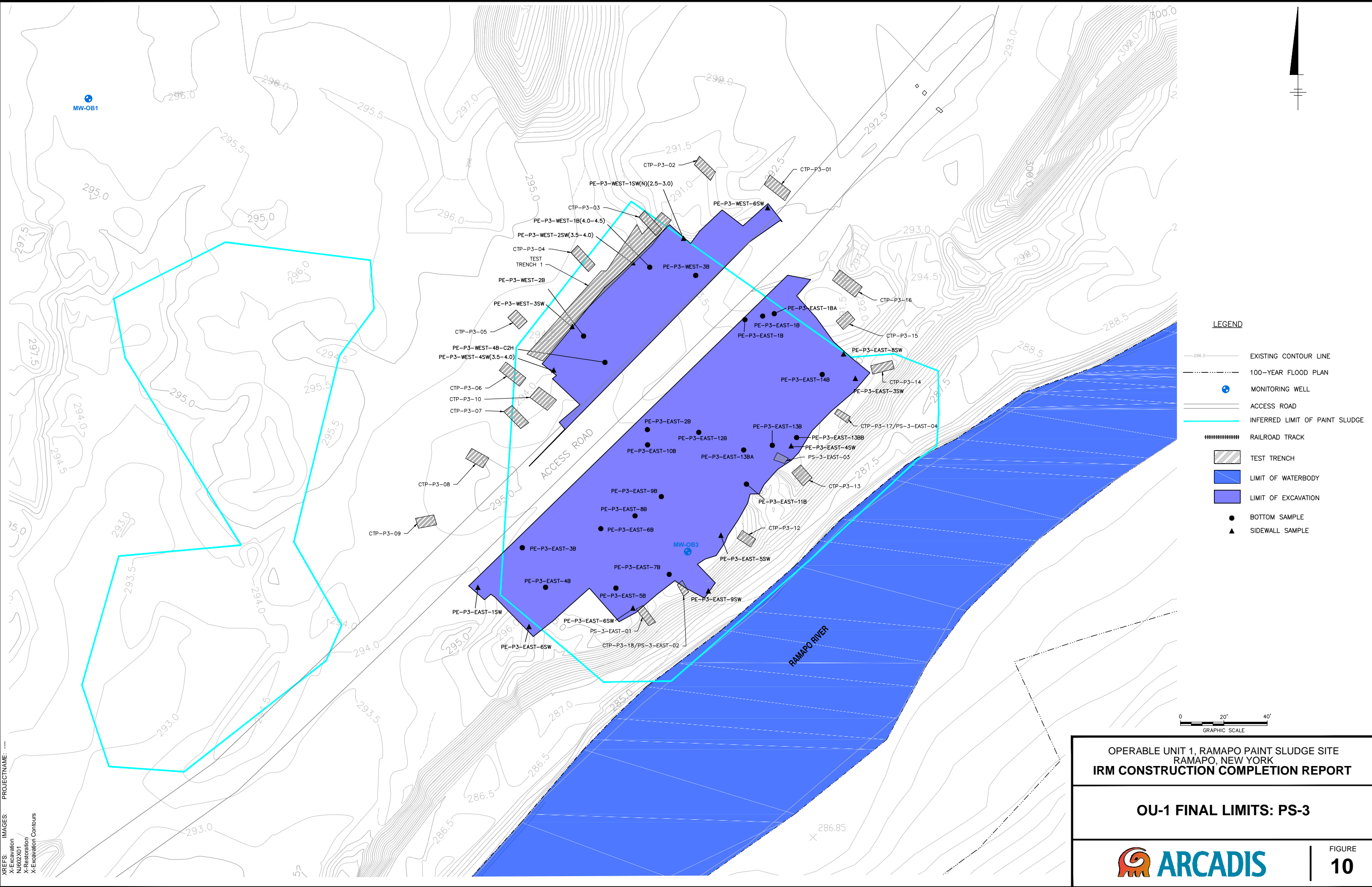
**OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
 RAMAPO, NEW YORK
 IRM CONSTRUCTION COMPLETION REPORT**

OU-1 FINAL LIMITS: PS-2

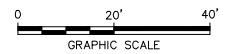
ARCADIS

FIGURE
9

CITY:FAIRLAWN,NJ DIV:GROUP:ENV/CAD DB:G:STEINBERGER LD:J:GONZALEZ PIC:R:ELLIS PM:E:ZIMMERMAN TM:J:ROCKLIN LY:RON:"OFF-REF"
 \\\VARCOM\GIS\485\office\data\Fairlawr\NJ\ENV\CAD\Fairlawr\OU-1 FINAL LIMITS_PS-3.dwg LAYOUT: 10 SAVED: 9/3/2014 4:19 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: ARCADIS\MAHWAH\CTB PLOTTED: 9/3/2014 4:21 PM BY: BERIDGEN, WENDY



- LEGEND**
- 296.0 — EXISTING CONTOUR LINE
 - - - - - 100-YEAR FLOOD PLAN
 - MONITORING WELL
 - ACCESS ROAD
 - INFERRED LIMIT OF PAINT SLUDGE
 - ||||| RAILROAD TRACK
 - ▨ TEST TRENCH
 - LIMIT OF WATERBODY
 - LIMIT OF EXCAVATION
 - BOTTOM SAMPLE
 - ▲ SIDEWALL SAMPLE



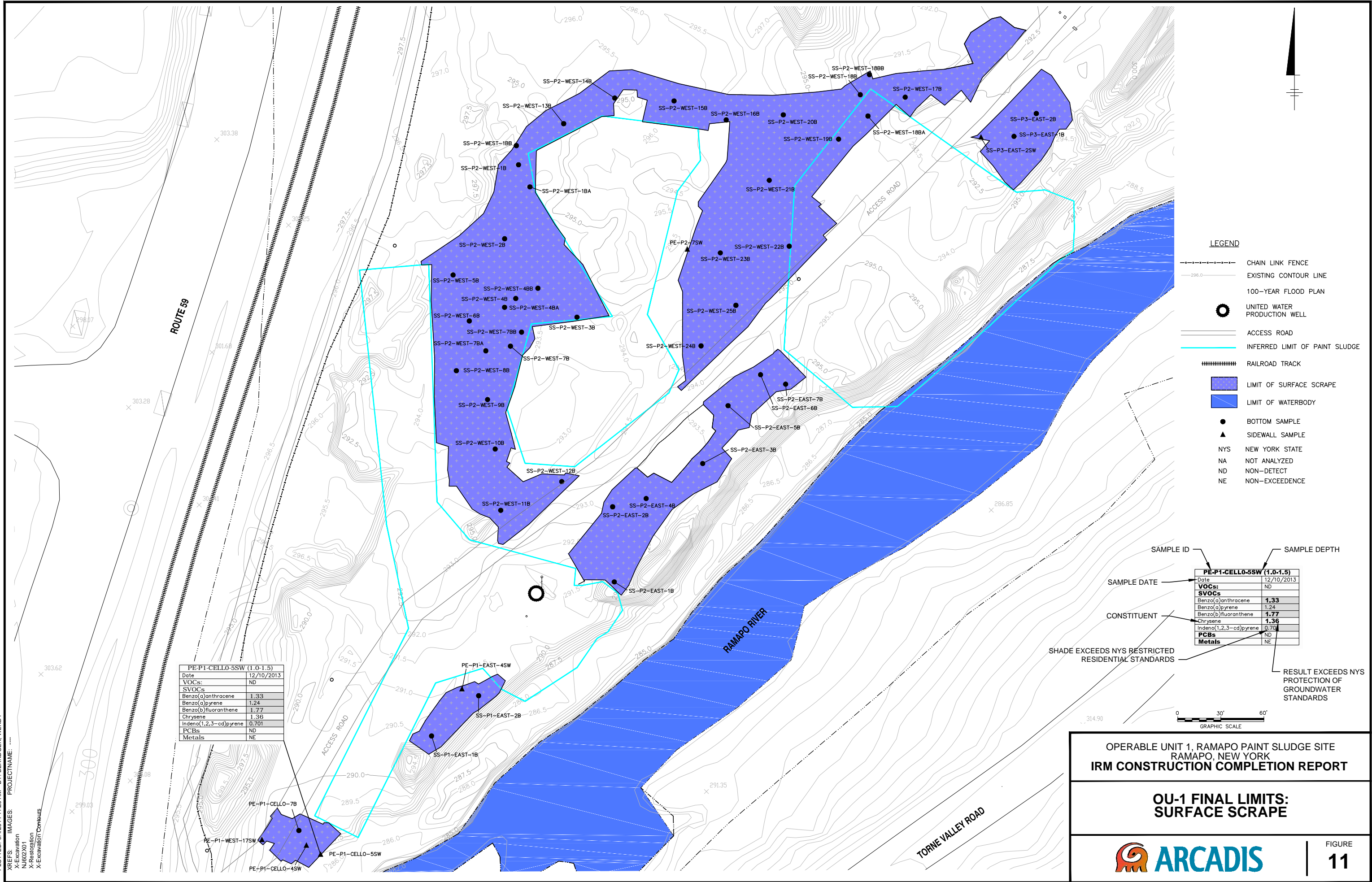
OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
 RAMAPO, NEW YORK
IRM CONSTRUCTION COMPLETION REPORT

OU-1 FINAL LIMITS: PS-3



FIGURE
10

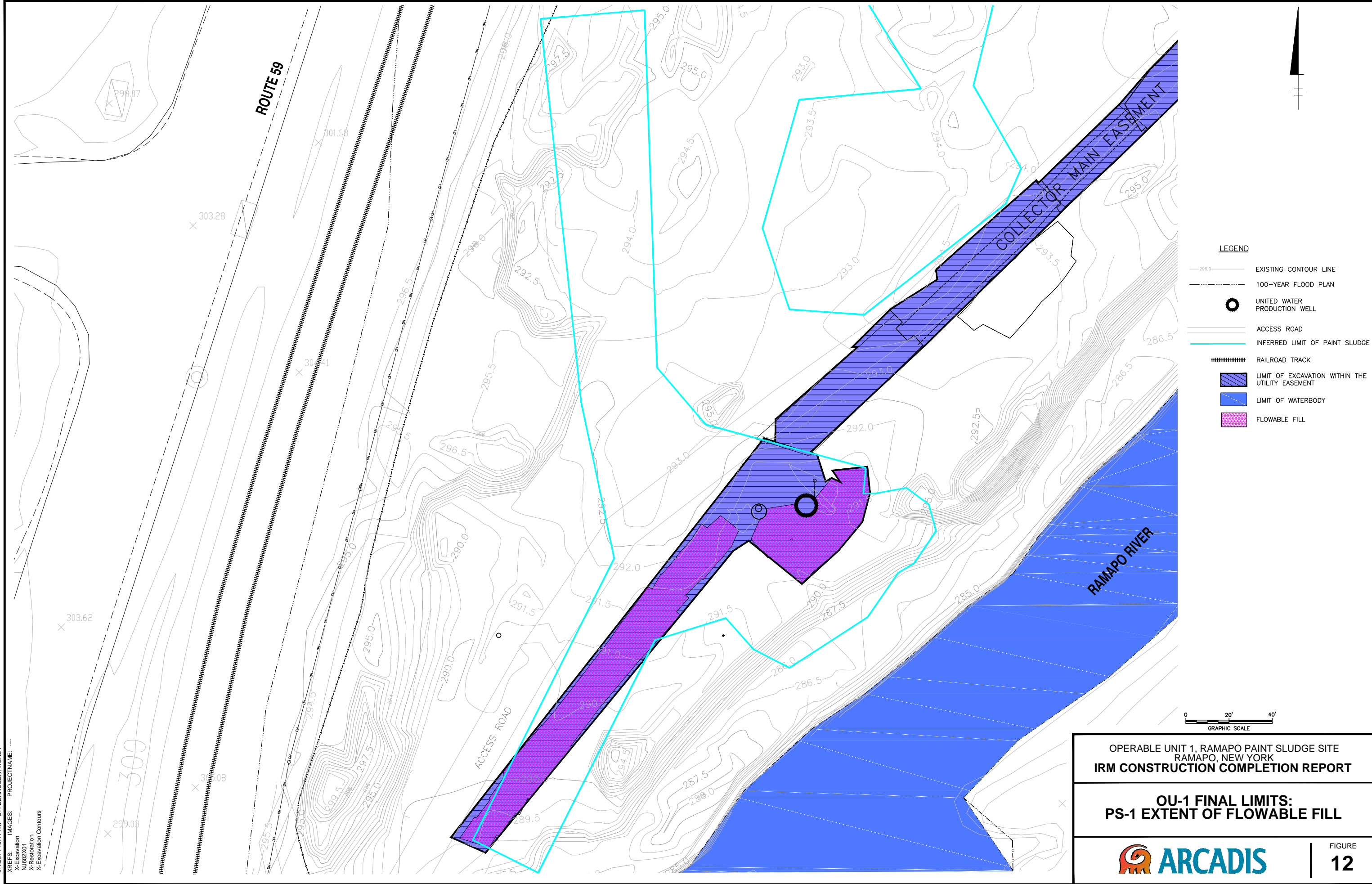
PROJECTNAME: X-Excavation N002X01 X-Restoration X-Excavation Contours



OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
RAMAPO, NEW YORK
IRM CONSTRUCTION COMPLETION REPORT

OU-1 FINAL LIMITS:
SURFACE SCRAPE



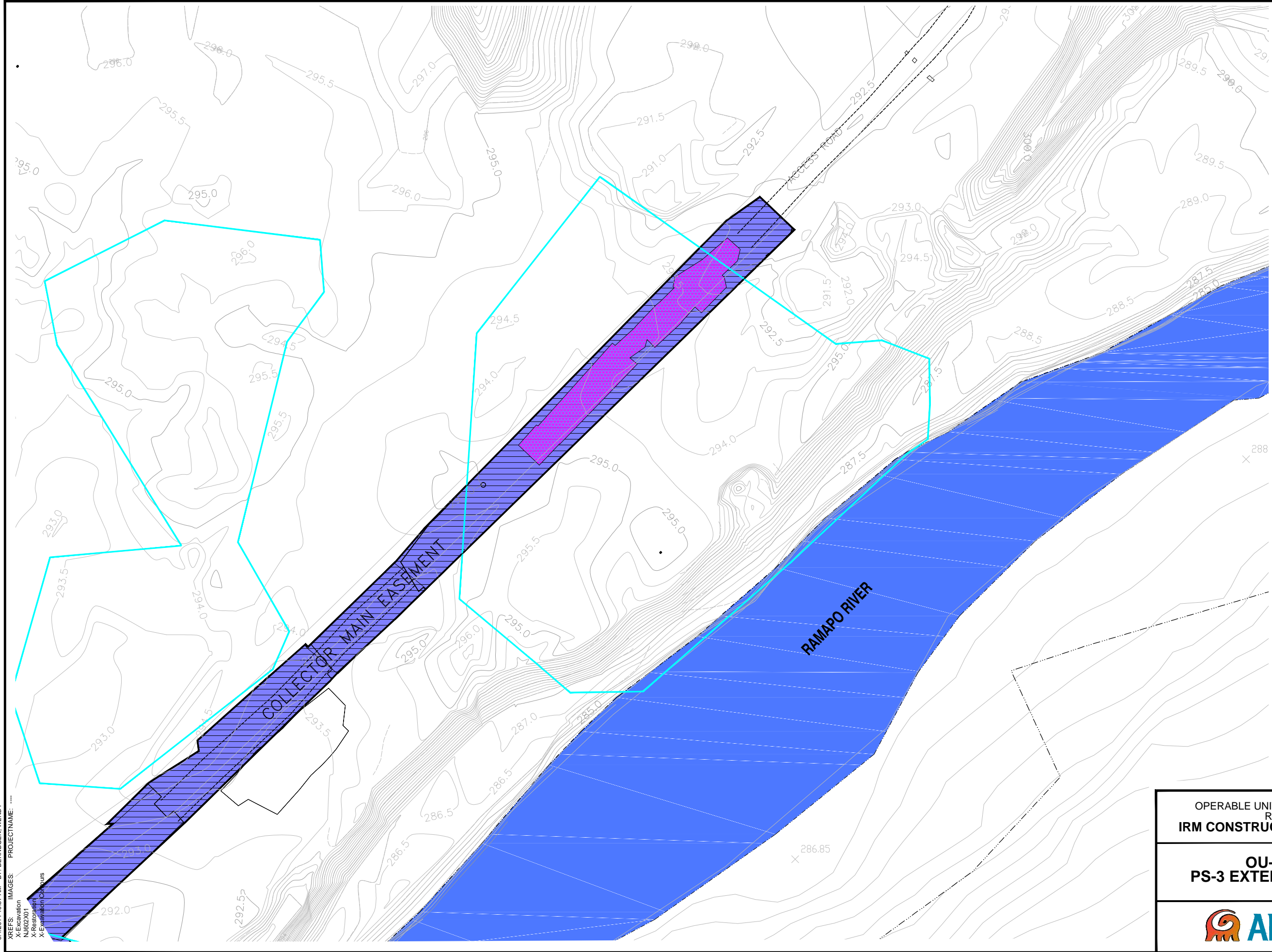


OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
RAMAPO, NEW YORK
IRM CONSTRUCTION COMPLETION REPORT

**OU-1 FINAL LIMITS:
PS-1 EXTENT OF FLOWABLE FILL**

ARCADIS

FIGURE
12



LEGEND

- 296.0 — EXISTING CONTOUR LINE
- 100-YEAR FLOOD PLAN
- UNITED WATER PRODUCTION WELL
- ACCESS ROAD
- INFERRED LIMIT OF PAINT SLUDGE
- |||||| RAILROAD TRACK
- ▨ LIMIT OF EXCAVATION WITHIN THE UTILITY EASEMENT
- ▩ LIMIT OF WATERBODY
- ▤ FLOWABLE FILL



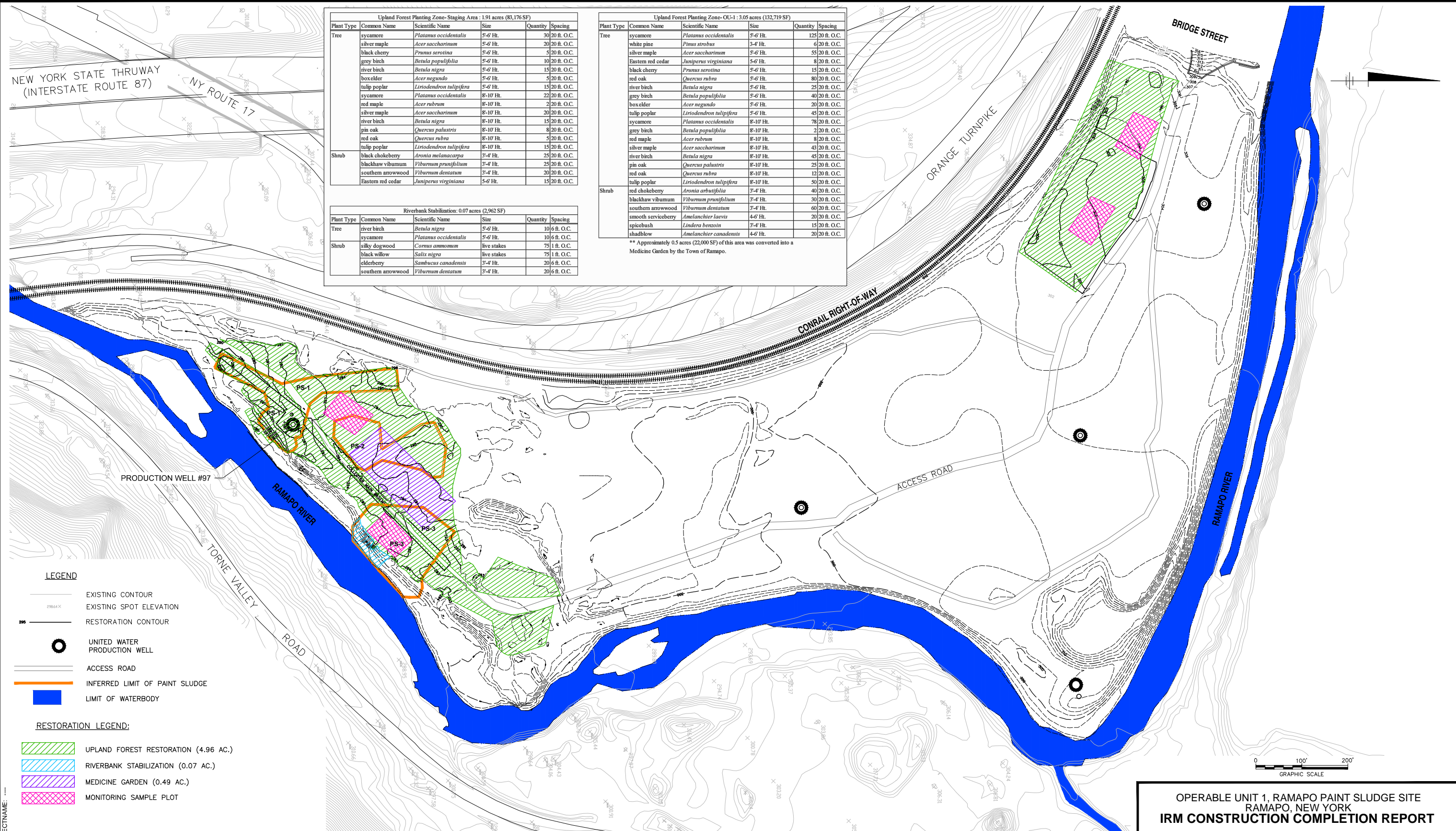
- X-Excavation
 N-NOZZLE
 X-Restoration
 X-Excavation Churn

OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
 RAMAPO, NEW YORK
IRM CONSTRUCTION COMPLETION REPORT

**OU-1 FINAL LIMITS:
 PS-3 EXTENT OF FLOWABLE FILL**

ARCADIS

FIGURE 13



Upland Forest Planting Zone- Staging Area : 1.91 acres (83,176 SF)

Plant Type	Common Name	Scientific Name	Size	Quantity	Spacing
Tree	sycamore	<i>Platanus occidentalis</i>	5-6 Ht.	30	20 ft. O.C.
	silver maple	<i>Acer saccharinum</i>	5-6 Ht.	20	20 ft. O.C.
	black cherry	<i>Prunus serotina</i>	5-6 Ht.	5	20 ft. O.C.
	grey birch	<i>Betula populifolia</i>	5-6 Ht.	10	20 ft. O.C.
	river birch	<i>Betula nigra</i>	5-6 Ht.	15	20 ft. O.C.
	box elder	<i>Acer negundo</i>	5-6 Ht.	5	20 ft. O.C.
	tulip poplar	<i>Liriodendron tulipifera</i>	5-6 Ht.	15	20 ft. O.C.
	sycamore	<i>Platanus occidentalis</i>	8-10 Ht.	22	20 ft. O.C.
	red maple	<i>Acer rubrum</i>	8-10 Ht.	2	20 ft. O.C.
	silver maple	<i>Acer saccharinum</i>	8-10 Ht.	20	20 ft. O.C.
Shrub	black chokeberry	<i>Aronia melanocarpa</i>	3-4 Ht.	25	20 ft. O.C.
	blackhaw viburnum	<i>Viburnum prunifolium</i>	3-4 Ht.	25	20 ft. O.C.
	southern arrowwood	<i>Viburnum dentatum</i>	3-4 Ht.	20	20 ft. O.C.
	Eastern red cedar	<i>Juniperus virginiana</i>	5-6 Ht.	15	20 ft. O.C.

Riverbank Stabilization: 0.07 acres (2,962 SF)

Plant Type	Common Name	Scientific Name	Size	Quantity	Spacing
Tree	river birch	<i>Betula nigra</i>	5-6 Ht.	10	6 ft. O.C.
	sycamore	<i>Platanus occidentalis</i>	5-6 Ht.	10	6 ft. O.C.
Shrub	silly dogwood	<i>Cornus amomum</i>	live stakes	75	1 ft. O.C.
	black willow	<i>Salix nigra</i>	live stakes	75	1 ft. O.C.
	elderberry	<i>Sambucus canadensis</i>	3-4 Ht.	20	6 ft. O.C.
	southern arrowwood	<i>Viburnum dentatum</i>	3-4 Ht.	20	6 ft. O.C.

Upland Forest Planting Zone-OU-1 : 3.05 acres (132,719 SF)

Plant Type	Common Name	Scientific Name	Size	Quantity	Spacing
Tree	sycamore	<i>Platanus occidentalis</i>	5-6 Ht.	125	20 ft. O.C.
	white pine	<i>Pinus strobus</i>	3-4 Ht.	6	20 ft. O.C.
	silver maple	<i>Acer saccharinum</i>	5-6 Ht.	55	20 ft. O.C.
	Eastern red cedar	<i>Juniperus virginiana</i>	5-6 Ht.	8	20 ft. O.C.
	black cherry	<i>Prunus serotina</i>	5-6 Ht.	15	20 ft. O.C.
	red oak	<i>Quercus rubra</i>	5-6 Ht.	80	20 ft. O.C.
	river birch	<i>Betula nigra</i>	5-6 Ht.	25	20 ft. O.C.
	grey birch	<i>Betula populifolia</i>	5-6 Ht.	40	20 ft. O.C.
	box elder	<i>Acer negundo</i>	5-6 Ht.	20	20 ft. O.C.
	tulip poplar	<i>Liriodendron tulipifera</i>	5-6 Ht.	45	20 ft. O.C.
	sycamore	<i>Platanus occidentalis</i>	8-10 Ht.	78	20 ft. O.C.
	grey birch	<i>Betula populifolia</i>	8-10 Ht.	2	20 ft. O.C.
	red maple	<i>Acer rubrum</i>	8-10 Ht.	8	20 ft. O.C.
	silver maple	<i>Acer saccharinum</i>	8-10 Ht.	43	20 ft. O.C.
	Shrub	river birch	<i>Betula nigra</i>	8-10 Ht.	45
pin oak		<i>Quercus palustris</i>	8-10 Ht.	25	20 ft. O.C.
red oak		<i>Quercus rubra</i>	8-10 Ht.	12	20 ft. O.C.
tulip poplar		<i>Liriodendron tulipifera</i>	8-10 Ht.	50	20 ft. O.C.
red chokeberry		<i>Aronia arbutifolia</i>	3-4 Ht.	40	20 ft. O.C.
blackhaw viburnum		<i>Viburnum prunifolium</i>	3-4 Ht.	30	20 ft. O.C.
southern arrowwood		<i>Viburnum dentatum</i>	3-4 Ht.	60	20 ft. O.C.
smooth serviceberry		<i>Amelanchier laevis</i>	4-6 Ht.	20	20 ft. O.C.
spicebush		<i>Lindera benzoin</i>	3-4 Ht.	15	20 ft. O.C.
shadbowl		<i>Amelanchier canadensis</i>	4-6 Ht.	20	20 ft. O.C.

** Approximately 0.5 acres (22,000 SF) of this area was converted into a Medicine Garden by the Town of Ramapo.

LEGEND

- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- RESTORATION CONTOUR
- UNITED WATER PRODUCTION WELL
- ACCESS ROAD
- INFERRED LIMIT OF PAINT SLUDGE
- LIMIT OF WATERBODY

RESTORATION LEGEND:

- UPLAND FOREST RESTORATION (4.96 AC.)
- RIVERBANK STABILIZATION (0.07 AC.)
- MEDICINE GARDEN (0.49 AC.)
- MONITORING SAMPLE PLOT

NOTE:

SITE AND RIVER BOUNDARY INFORMATION FOR OU-1 WAS PROVIDED BY BORBAS SURVEYING AND MAPPING, LLC SURVEYORS, FROM A CAD DRAWING NAMED "071005_2014-03-03_RESTORATION_SEND.dwg"

OPERABLE UNIT 1, RAMAPO PAINT SLUDGE SITE
RAMAPO, NEW YORK
IRM CONSTRUCTION COMPLETION REPORT

OU-1 FINAL LIMITS:
SITE RESTORATION

FIGURE 14