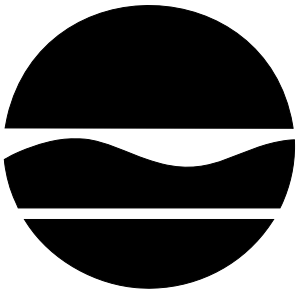
NEW YORK STATE
DEPARTMENT OF
ENVIRONMENTAL CONSERVATION



6 NYCRR PART 373
HAZARDOUS WASTE MANAGEMENT
PERMIT

FOR

CWM CHEMICAL SERVICES L.L.C
MODEL CITY FACILITY
NIAGARA COUNTY

DEC PERMIT No. 9-2934-00022/00097

EPA ID No. NYD049836679

VOLUME 4 OF 5

Table of Contents – Volume 4 of 5

ATTACHMENT J

Sections D-6, D-7 & D-8
RMU-1 Drawings,
Technical Specifications &
Construction Quality Assurance
Manual

(The contents of Attachment J have been derived from the Permit application submitted by CWM Chemical Services, L.L.C.)

APPENDIX D-6
RMU-1 DRAWINGS

CWM CHEMICAL SERVICES, INC.
RESIDUALS MANAGEMENT UNIT 1
MODEL CITY, NIAGARA COUNTY, NEW YORK

INDEX

DRAWING NO.	TITLE	FILE NO.
1	TITLE AND INDEX	A-55299
2	PROPOSED RMU-1 SITE	A-55298
3	BORING LOCATIONS	A-55297
4	EXCAVATION GRADES	A-55296
5	SUBBASE GRADES	A-55295
6	SECONDARY CLAY LINER GRADES	A-55294
7	SECONDARY LEACHATE GRANULAR LAYER GRADES	A-55293
8	PRIMARY CLAY LINER GRADES	A-55292
9	PRIMARY LEACHATE GRANULAR LAYER GRADES	A-55291
10	OPERATIONS LAYER GRADES	A-55290
11	TOP OF WASTE GRADES	A-55289
12	TOP OF VEGETATIVE COVER GRADES	A-55288
13	SUMP CONSTRUCTION GRADES	A-55287
13A	SUMP CONSTRUCTION GRADES CELL 5	
13B	SUMP CONSTRUCTION GRADES CELL 5	
13C	SUMP CONSTRUCTION GRADES CELL 6	
13D	SUMP CONSTRUCTION GRADES CELL 7	
13E	SUMP CONSTRUCTION GRADES CELL 10	
13G	SUMP CONSTRUCTION GRADES CELL 13	
13H	SUMP CONSTRUCTION GRADES CELL 14	
15	CROSS SECTION 16+50E	A-55285
15A	CROSS SECTION 23+25E	A-55284
16	CROSS SECTION 85+50N AND 91+00N	A-55283
16A	CROSS SECTION 97+50N	A-55282
17	TYPICAL LINER SECTIONS CELLS 1 THROUGH 6, AND 9 THROUGH 14	
17A	TYPICAL LINER SECTIONS CELLS 7 THROUGH 14	A-55281
18	SUMP DETAILS	
18A	SUMP DETAILS CELLS 5 THROUGH 14	
19	CELL SEPARATION BERM DETAILS	
19B	CELL SEPARATION BERM DETAILS CELLS 5 AND 6	

INDEX

DRAWING NO.	TITLE	FILE NO.
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20	RISER DETAILS	A-55280
21	FINAL COVER DETAILS	A-55279
21A	SITE DETAILS	
22	SITE SURFACE WATER PLAN AND DETAILS	A-55278
23	ACCESS ROAD LAYOUT AND DETAILS	A-55277
24	LEACHATE TRANSFER SYSTEM AND ELECTRICAL SITE PLAN	A-55276
25	LEACHATE EXTRACTION DETAILS CELLS 1 THROUGH 4	A-55275
25A	LEACHATE EXTRACTION DETAILS CELLS 5,6,7, 10, 13 & 14	
26	LIFT STATION AND JUNCTION MANHOLES	A-55274
27	STRUCTURAL DETAILS	A-55273
28	ELECTRICAL PLAN, SYMBOLS AND DETAILS	A-55272
29	ELECTRICAL DETAILS AND DIAGRAMS	A-55271
30	LIFT STATION PANEL LAYOUT	A-55270
31	REMOTE TRANSMITTING UNIT PANEL LAYOUT	A-55269
32	PRIMARY AND SECONDARY PANEL LAYOUT	A-55268
33	INSTRUMENT RISER DIAGRAM	A-55267
34	INSTRUMENTATION SYMBOLS AND DETAILS	A-55266

STATE OF NEW YORK
CHARLES P. BALLOD
LICENSED PROFESSIONAL ENGINEER
59688-1
FEB 04 1999

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

REV.	DATE	DESCRIPTION	CHK BY	APP BY
5	5-98	REVISED AND ADDED DRAWINGS FOR INTERFACE ENHANCEMENT	FAS	CPM
4	10-97	REVISED PER 9/22/97 DEC LETTER, REMOVED DRAWING 19A	FAS	CPM
3	6-97	REVISED AND ADDED DRAWINGS CELLS 9 THRU 14, REMOVED DRAWINGS 13C AND 14	FAS	CPB
2	6-97	REVISED DRAWINGS 13D, 19A AND 25A	FAS	CPM
1	4-97	REVISED AND ADDED DRAWINGS FOR CELL 9	FAS	CPB
	11-96	REVISED AND ADDED DRAWINGS FOR CELLS 7 AND 8	FAS	CPB
	10-96	REVISED DRAWING 25A	FAS	CPB
	7-96	REVISED AND ADDED DRAWINGS	FAS	CPM
	6-96	REVISED DRAWINGS	FAS	CPM
	4-96	MODIFIED DRAWINGS FOR CELL 6	FAS	CPM
	11-95	ADDED DRAWINGS	VPR	CPM
	7-93	REVISED SHEET TITLES	MLJ	MCR
	6-92	NOTICE OF DEFICIENCY RESPONSES	FLD	GRM

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE

DATE

DES BY	DRW T.JP
DRN BY	FLD
CHK BY	MCR
ENV BY	TJB
ENV BY	CFF
APP BY	GRM

PROJECT NO. 17305 DATE FEBRUARY 1991

PROJECT: RESIDUALS MANAGEMENT UNIT 1

DRAWING TITLE: TITLE AND INDEX

CWM CHEMICAL SERVICES, INC.
MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. A-55299

DRAWING NO. 1

CWM CHEMICAL SERVICES, LLC.
RESIDUALS MANAGEMENT UNIT 1
MODEL CITY, NIAGARA COUNTY, NEW YORK

DRAWING NO.	TITLE	FILE NO.
1	TITLE AND INDEX	A-55299
1-a	TITLE AND INDEX	
2	PROPOSED RMU-1 SITE	A-55298
2-a	PROPOSED RMU-1 SITE	
3	BORING LOCATIONS	A-55297
4	EXCAVATION GRADES	A-55296
5	SUBBASE GRADES	A-55295
5-a	SUBBASE GRADES	
6	SECONDARY CLAY LINER GRADES	A-55294
6-a	SECONDARY CLAY LINER GRADES	
7	SECONDARY LEACHATE GRANULAR LAYER GRADES	A-55293
7-a	SECONDARY LEACHATE GRANULAR LAYER GRADES	
8	PRIMARY CLAY LINER GRADES	A-55292
8-a	PRIMARY CLAY LINER GRADES	
9	PRIMARY LEACHATE GRANULAR LAYER GRADES	A-55291
9-a	PRIMARY LEACHATE GRANULAR LAYER GRADES	
10	OPERATIONS LAYER GRADES	A-55290
10-a	OPERATIONS LAYER GRADES	
11	TOP OF WASTE GRADES	A-55289
11-a	TOP OF WASTE GRADES	
12	TOP OF VEGETATIVE COVER GRADES	A-55288
12-a	TOP OF VEGETATIVE COVER GRADES	
13	SUMP CONSTRUCTION GRADES	A-55287
13A	SUMP CONSTRUCTION GRADES CELL 5	
13B	SUMP CONSTRUCTION GRADES CELL 5	
13C	SUMP CONSTRUCTION GRADES CELL 6	
13D	SUMP CONSTRUCTION GRADES CELL 7	
13E	SUMP CONSTRUCTION GRADES CELL 10	
13G	SUMP CONSTRUCTION GRADES CELL 13	
13H	SUMP CONSTRUCTION GRADES CELL 14	
15	CROSS SECTION 16+50E	A-55285
15A	CROSS SECTION 23+25E	A-55284
15A-a	CROSS SECTION 23+25E	A-55284
16	CROSS SECTION 85+50N AND 91+00N	A-55283
16-a	CROSS SECTION 85+50N AND 91+00N	A-55282
16A	CROSS SECTION 97+50N	
17	TYPICAL LINER SECTIONS CELLS 1 THROUGH 6, AND 9 THROUGH 14	A-55281
17A	TYPICAL LINER SECTIONS CELLS 7 THROUGH 14	
18	SUMP DETAILS	
18A	SUMP DETAILS CELLS 5 THROUGH 14	

DRAWING NO.	TITLE	FILE NO.
19	CELL SEPARATION BERM DETAILS	
19B	CELL SEPARATION BERM DETAILS CELLS 5 AND 6	
19C	CELL SEPERATION BERM DETAILS FOR CELLS 7 THROUGH 14	
20	RISER DETAILS	A-55280
20-a	RISER DETAILS (WITH COMPACTED CLAY)	A-55279
21	FINAL COVER DETAILS	A-55279
21-a	FINAL COVER DETAILS (WITH COMPACTED CLAY)	
21A	SITE DETAILS	
21A-a	SITE DETAILS (WITH COMPACTED CLAY)	
21B	SITE DETAILS (WITH COMPACTED CLAY)	
21C	FINAL COVER DETAILS (WITH GCL)	
21D	FINAL COVER DETAILS (WITH GCL)	
22	SITE SURFACE WATER PLAN AND DETAILS	A-55278
22-a	SITE SURFACE WATER PLAN AND DETAILS	
23	ACCESS ROAD LAYOUT AND DETAILS	A-55277
23-a	ACCESS ROAD LAYOUT AND DETAILS	
23A	LANDFILL PLATEAU ACCESS ROAD DETAILS	
24	LEACHATE TRANSFER SYSTEM AND ELECTRICAL SITE PLAN	A-55276
25	LEACHATE EXTRACTION DETAILS CELLS 1 THROUGH 4	A-55275
25A	LEACHATE EXTRACTION DETAILS CELLS 5,6,7, 10, 13 & 14	
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33	INSTRUMENT RISER DIAGRAM	A-55267
34	INSTRUMENTATION SYMBOLS AND DETAILS	A-55266

NOTES:

1. THIS DRAWING BASED ON DRAWING NUMBER 1 ENTITLED "TITLE AND INDEX", PREPARED BY EARTH TECH (FILE NO. A-55299, DATED FEBRUARY 1991).
2. PRIOR REVISIONS TO DRAWING NUMBER 1 BY EARTHTECH INCLUDE THE FOLLOWING:
   1 NOTICE OF DEFICIENCY RESPONSES (DATED 6/92, DRAWN BY FLD, APPROVED BY GRM).
   2 REVISED SHEET TITLES (DATED 7/93, DRAWN BY MLJ; APPROVED BY MGR).
   3 ADDED DRAWINGS (DATED 11/95, DRAWN BY VPR, APPROVED BY CPB).
   4 MODIFIED DRAWINGS FOR CELL 6 (DATED 4/96, DRAWN BY FAS, APPROVED BY CPB).
   5 REVISED DRAWINGS (DATED 6/96, DRAWN BY FAS, APPROVED BY CPB).
   6 REVISED AND ADDED DRAWINGS (DATED 7/96, DRAWN BY FAS, APPROVED BY CPB).
   7 REVISED DRAWING 25A (DATED 10/96, DRAWN BY FAS, APPROVED BY CPB).
   8 REVISED AND ADDED DRAWINGS FOR CELLS 7 AND 8 (DATED 11/96, DRAWN BY FAS, APPROVED BY CPB). REVISED AND ADDED DRAWINGS FOR CELL 9 (DATED 4/97, DRAWN BY FAS, APPROVED BY CPB).
   9 REVISED DRAWINGS 13D, 18A, AND 25A (DATED 6/97, DRAWN BY FAS, APPROVED BY CPB).
   10 REVISED AND ADDED DRAWINGS CELLS 9 THRU 14, REMOVED DRAWINGS 13F AND 14 (DATED 6/97, DRAWN BY FAS, APPROVED BY CPB).
   11 APPROVED BY CPB).
   12 REVISED PER 9/22/97 DEC LETTER, REMOVED DRAWING 19A (DATED 10/97, DRAWN BY FAS, APPROVED BY CPB).
   13 REVISED AND ADDED DRAWINGS FOR AIRSPACE ENHANCEMENT (DATED 5/98, DRAWN BY FAS, APPROVED BY CPB).
3. BBL SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER. WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

STATE OF NEW YORK
JOSEPH MOLINA
072644
LICENSED PROFESSIONAL ENGINEER

Graphic Scale
NOT TO SCALE

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init
2	08/12	REVISED DRAWING 12-a ADDED DRAWING 23A	
1	10/03	ADDED DRAWINGS 15A-a, 16-a, 20-a, 21A-a, 21C, 21D REVISED TITLE OF DRAWING 21B, 17	
0	9/01	ADDED DRAWING 21B	
		SEE NOTE 2 FOR PRIOR REVISIONS	

Project Mgr. TJF
Designed by BMS/CAA
Drawn by SLM
Checked by PHB
Prof. Eng. JOSEPH MOLINA
PE License NY 072644

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

CWM CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

TITLE AND INDEX

GENERAL

File Number
050.42.005

Date
JUNE 2003

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

1-a

CITY: SYRACUSE, NY DIVGROUP-ENVICAD DB: KMD K.SARTORI LD:K.SARTORI PIC: W. POPHAM PM: T. FARMEN TM: B. STONE LYR:ON=*;OFF=*REF*
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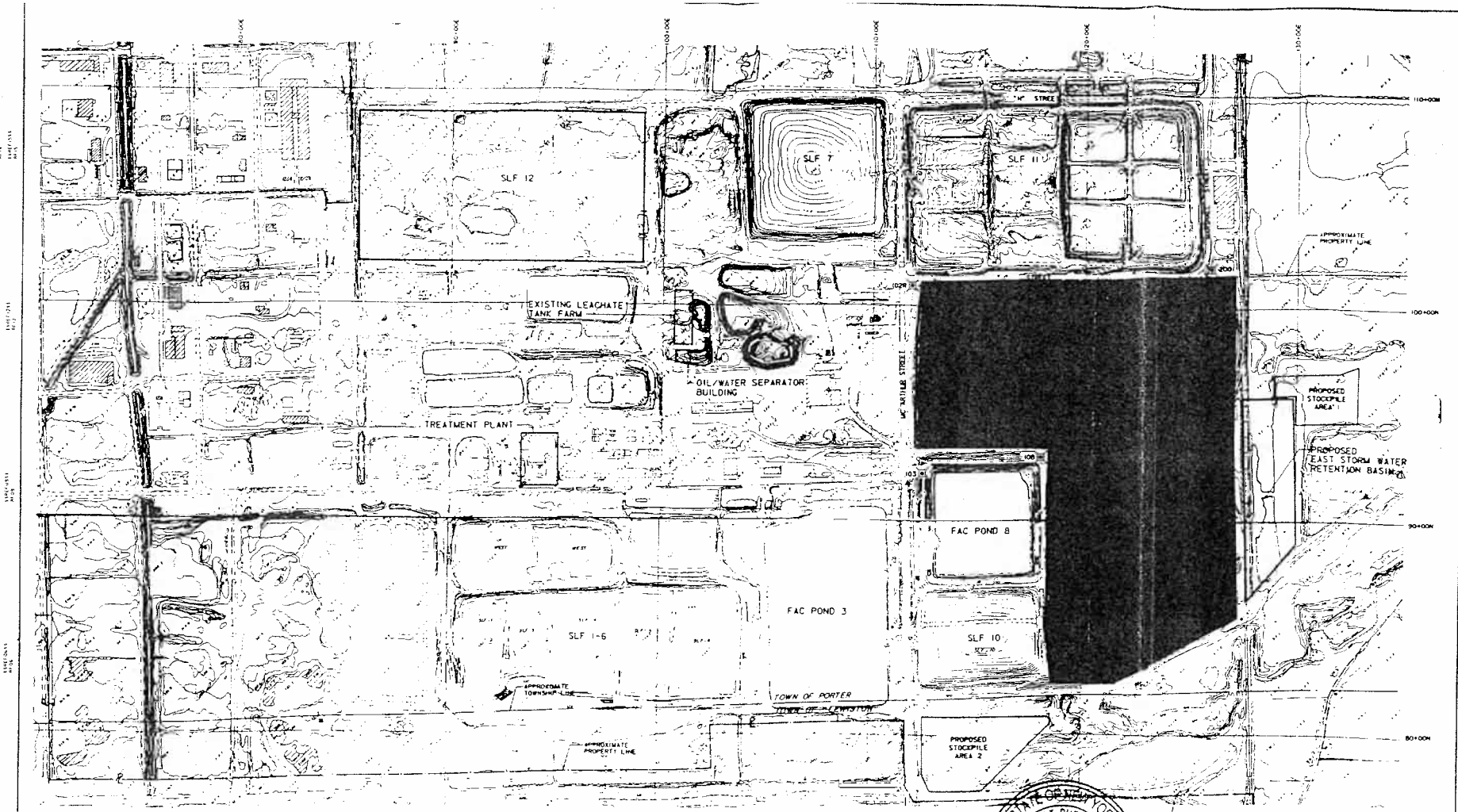


NOTES:

1. TOPOGRAPHIC BASE MAP WAS PREPARED BY LOCKWOOD SURVEY SERVICES, INC. WITH GROUND CONTROL FIELD CHECK AND FINAL DRAFT BY FRANK T. TRIPI AND ASSOC., P.C. DATED JUNE 1987.
2. GRID SYSTEM INDICATED HAS BEEN ESTABLISHED IN THE FIELD. THE MONUMENTS ARE AS INDICATED ON THE DRAWING AND ACCORDING TO THE TABLE ON THIS DRAWING. GRID COORDINATES ARE CWM PLANT SITE GRID ONLY, NOT RELATED TO ANY LOCAL DATUM NOR NEW YORK STATE PLANE COORDINATE SYSTEM. VERTICAL CONTROL IS ALSO CWM PLANT SITE DATUM.
3. EAST RMU-1 GRID COORDINATES LABELED ON THESE PLANS ARE SIMPLIFIED PLANT GRID NUMBERS. SUBTRACTING 10,000 FROM THE EAST PLANT GRID COORDINATES WILL GIVE THE RMU-1 EAST GRID COORDINATES. NO CONVERSION IS REQUIRED FOR NORTH COORDINATES.
4. THE PROPERTY LINE DEPICTED IS PER INFORMATION PROVIDED ON TOPOGRAPHIC BASE MAP. EASEMENT AND RIGHT-OF-WAYS ARE NOT SHOWN.

RMU-1 CONTROL POINTS

MONUMENTS	ELEVATION	PLANT GRID		RMU-1 GRID		NY STATE PLANE COORDINATES (NAD-27)		NGVD-29 ELEVATION
		NORTH	EAST	NORTH	EAST	NORTH	EAST	
1029	318.72	100+94.55	111+87.56	100+94.65	11+87.56	1,175,430.46	396,380.12	318.66
200	318.33	101+89.56	126+13.77	101+89.56	26+13.77	1,175,468.28	397,808.18	318.27
103	333.55	92+19.23	112+47.62	92+15.23	12+47.62			
108	332.90	92+93.26	118+06.98	92+93.26	18+06.98			

LEGEND

SCALE 0 100 200 400

STATE OF NEW YORK
JEFFREY T. BURRELL, SR.
LICENSED PROFESSIONAL ENGINEER
059268-1
7/9/93

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

REV	DATE	DESCRIPTION	FLD	CRM
1	6-92	NOTICE OF DEFICIENCY RESPONSE		

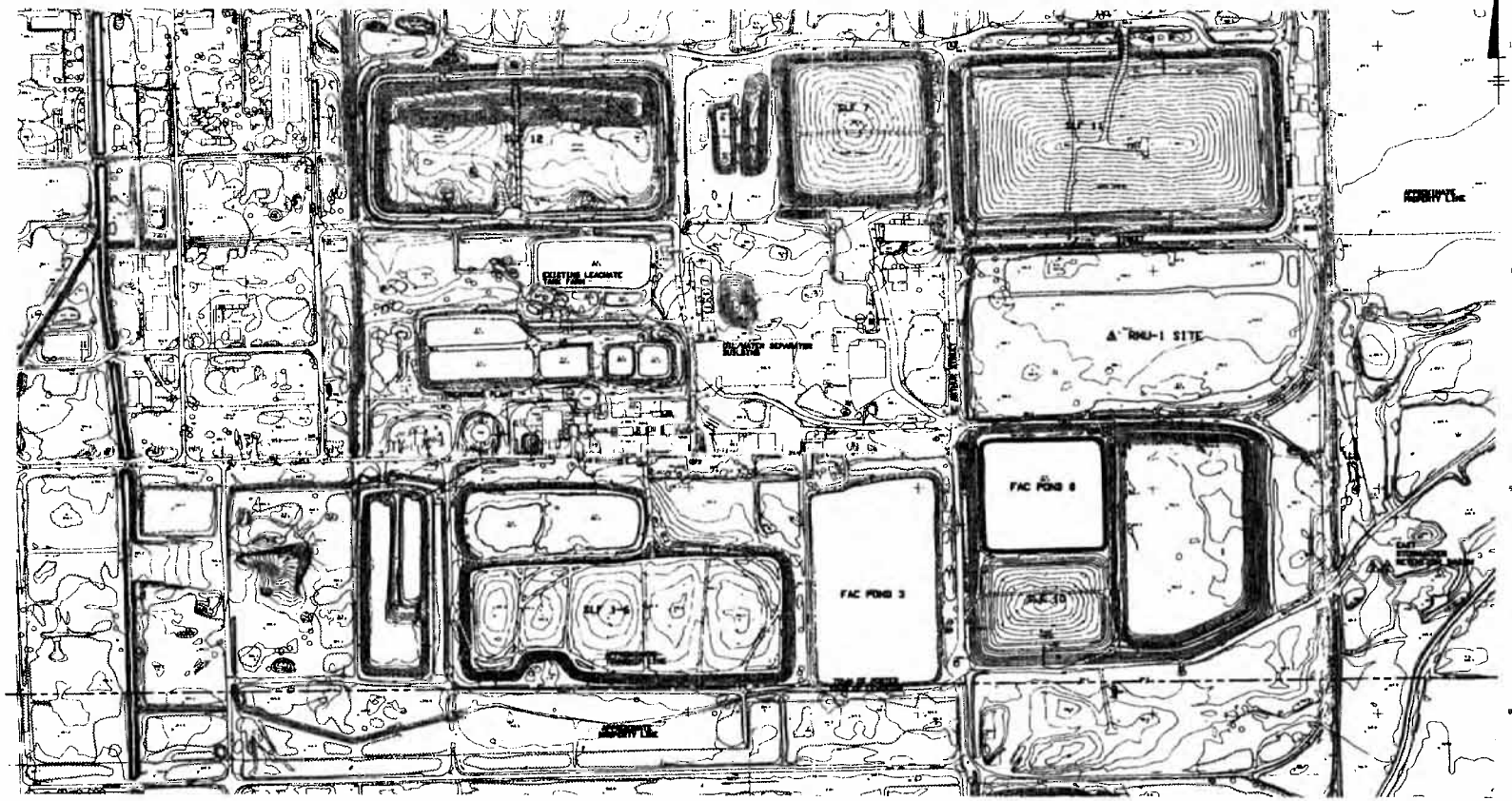
DES BY: BRJ/TJP1 | DR BY | APP BY
DRN BY: FLD
CHK BY: MGR
ENV BY: TJB
QA BY: CPF
APP BY: CRM

PROJECT NO. 1551 | DATE FEBRUARY 1991
PROJECT: RESIDUALS MANAGEMENT UNIT 1
DRAWING TITLE: PROPOSED RMU-1 SITE

SECOR DONOHUE
SHEBOYGAN, WISCONSIN 53083

CWM CHEMICAL SERVICES, INC.
MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. 4-55298
DRAWING NO. 2



NOTES:

1. TOPOGRAPHIC BASE MAP WAS PREPARED BY LOCKWOOD SURVEY SERVICES, INC. WITH GROUND CONTROL, FIELD CHECK AND FINAL DRAFT BY FRANK T. TRIPI AND ASSOC., P.C. DATED JUNE 1987.
2. GRID SYSTEM INDICATED HAS BEEN ESTABLISHED IN THE FIELD. THE MONUMENTS ARE AS INDICATED ON THE DRAWING AND ACCORDING TO THE TABLE ON THIS DRAWING. GRID COORDINATES ARE CWM PLANT SITE GRID ONLY, NOT RELATED TO ANY LOCAL DATUM NOR NEW YORK STATE PLANE COORDINATE SYSTEM. VERTICAL CONTROL IS ALSO CWM PLANT SITE DATUM.
3. EAST RMU-1 GRID COORDINATES LABELED ON THESE PLANS ARE SIMPLIFIED PLANT GRID NUMBERS. SUBTRACTING 10,000 FROM THE EAST PLANT GRID COORDINATES WILL GIVE THE RMU-1 EAST GRID COORDINATES. NO CONVERSION IS REQUIRED FOR NORTH COORDINATES.
4. THE PROPERTY LINE DEPICTED IS PER INFORMATION PROVIDED ON TOPOGRAPHIC BASE MAP. EASEMENT AND RIGHT-OF-WAYS ARE NOT SHOWN.

RMU-1 CONTROL POINTS

MONUMENTS	ELEVATION	PLANT GRID NORTH	PLANT GRID EAST	RMU-1 GRID NORTH	RMU-1 GRID EAST	NY STATE PLANE COORDINATES (NAD-27) NORTH	NY STATE PLANE COORDINATES (NAD-27) EAST	NGVD-29 ELEVATION
1089	319.72	100+94.55	111+87.56	100+94.65	11+87.56	1,175,430.46	396,380.12	315.66
200	318.23	101+89.56	126+13.77	101+89.56	26+13.77	1,175,488.28	397,808.18	318.27
103	333.55	98+19.23	112+47.62	98+19.23	12+47.62			
108	332.90	98+93.26	118+06.98	98+93.26	18+06.98			

LEGEND:

⊙ CONTROL MONUMENT

⚠ NOTES:

1. THIS DRAWING IS BASED ON A DRAWING ENTITLED "PROPOSED RMU-1 SITE", PREPARED BY EARTH TECH (FILE NO. A-50286 DATED FEBRUARY 1991, LATEST REVISION DATED).
2. PRIOR REVISIONS BY EARTH TECH INCLUDE THE FOLLOWING:

   1) NOTICE OF DEFICIENCY RESPONSES (DATED 6/92, DRAWN BY FLD, APPROVED BY CRW).
3. BBL SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER. WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

N: 0504300.DWG
L: ON=* OFF=*REF*
F: FAGERET/PLT-COL-36
12/8/04 SYR-86-NEE LAF GMS
0504300S/0504281.DWG

Graphic Scale
240' 0 360' 500'

No.	Date	Revisions	Init.
2	12/04	DELETED "PROPOSED"	
1	8/01	REVISIONS TO STORMWATER RETENTION BASIN	
		SEE NOTE 2 FOR PRIOR REVISIONS	

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

THESE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF BLASLAND, BOUCK & LEE, INC. AND ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF BLASLAND, BOUCK & LEE, INC.

Project Mgr. TF
Designed by BKS/CAA
Drawn by SLM
Checked by PJB
Prof. Eng. JOSEPH MOLINA, JR.
PE License NY 072864

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

CWM CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

PROPOSED RMU-1 SITE

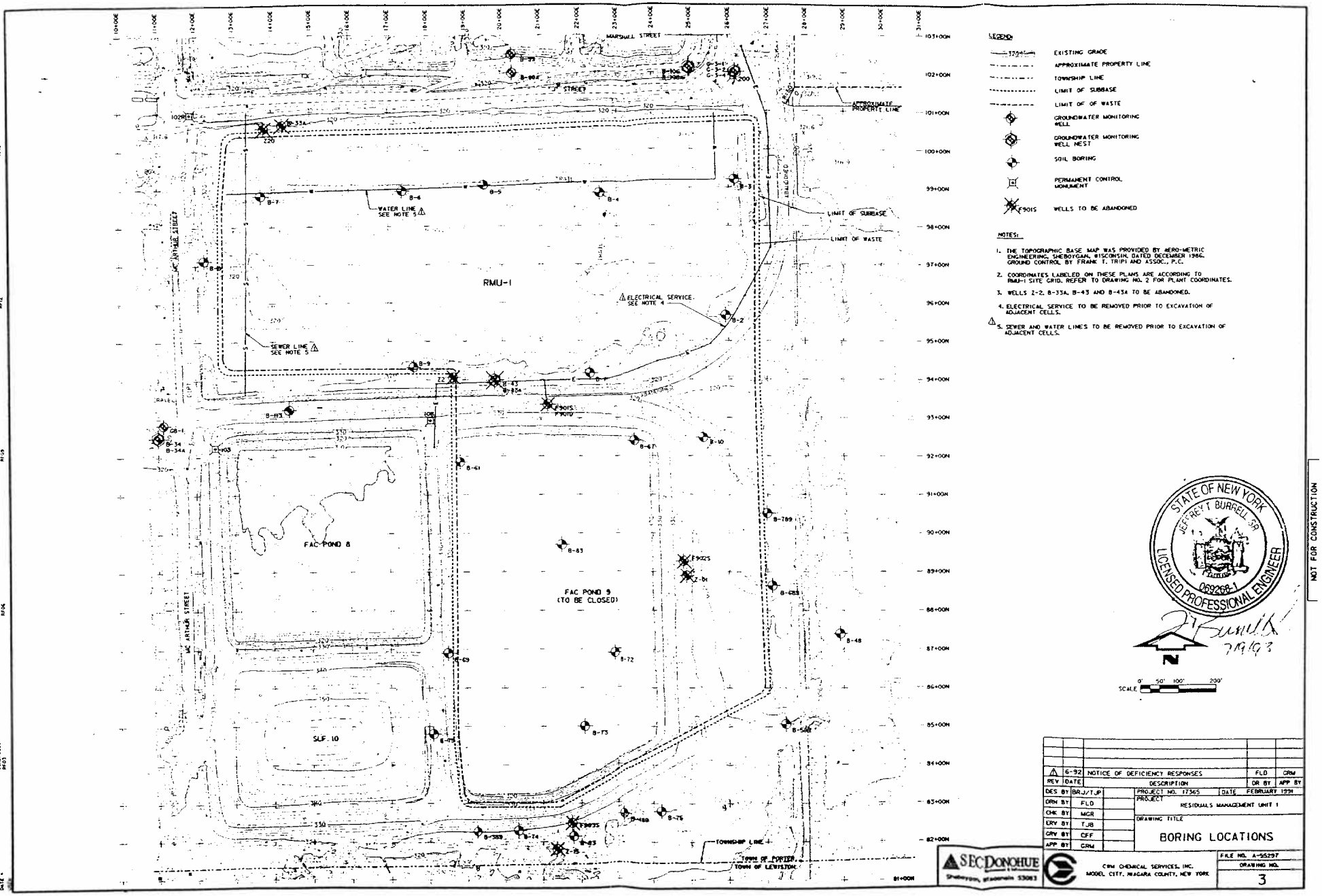
GENERAL

Modified: 07/09

File Number 050.42
Date JUNE 2003

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

2-a



NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DR BY	APP BY
1	6-92	NOTICE OF DEFICIENCY RESPONSES	FLD	GRM

DES BY	BRJ/TJP
DRN BY	FLD
CHK BY	MGR
ENV BY	TJB
GRV BY	CFF
APP BY	GRM

PROJECT NO. 17365 DATE FEBRUARY 1991

PROJECT: RESIDUALS MANAGEMENT UNIT 1

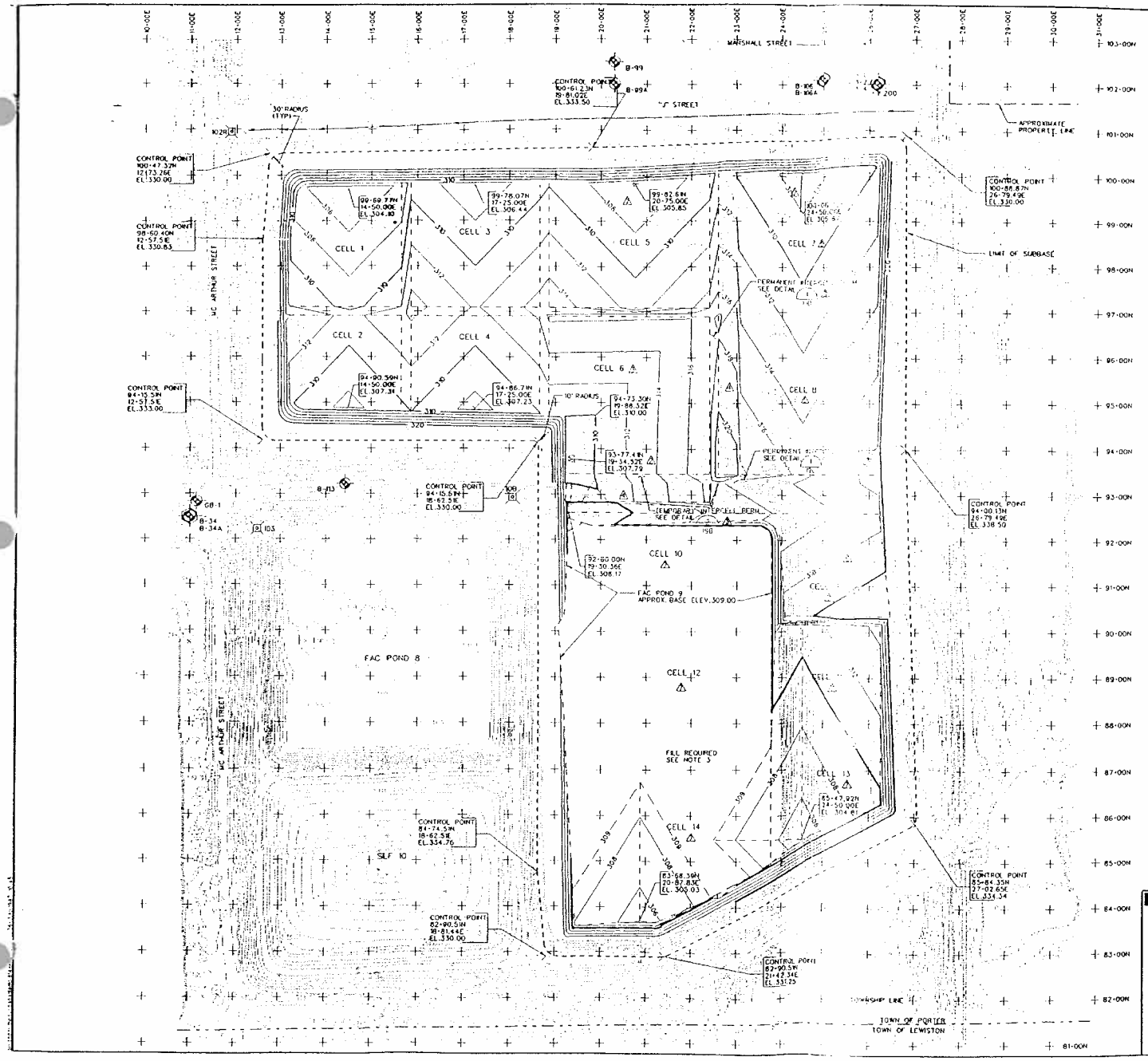
DRAWING TITLE: BORING LOCATIONS

SECDONOHUE Sheboygan, Wisconsin 53083

CRM CHEMICAL SERVICES, INC.
MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. A-95297

DRAWING NO. 3



NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK T. TRIPLAND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO RMS I STATE GRID. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES SHOWN ARE APPROXIMATE LIMITS OF EXCAVATION. FILL IS REQUIRED OVER A PORTION OF FAC. POND 9 FOR SUBBASE GRADE. IF SOIL WITHIN THE EXCAVATION AREA WILL BE STRIPPED AND STOCKPILED IN AREAS DESIGNATED BY THE OWNER.
4. SURFACE DRAINAGE SHALL BE DIRECTED AROUND EXCAVATION. SURFACE WATER SHALL BE PUMPED TO ADJACENT DRAINAGE DITCHES AND ROUTED TO EXISTING STORM WATER RETENTION BASINS DURING CONSTRUCTION.
5. SOG SLOPE AND ANCHOR TRENCH AREA SHALL BE OVERCUT AS SHOWN ON DETAILS.
6. WELLS TO BE ABANDONED ARE AS INDICATED. CONTRACTOR TO VERIFY SCHEDULE WITH OWNER.
7. RELOCATE OR ABANDON UTILITIES PER PROJECT SPECIFICATIONS AND WITH AUTHORIZATION OF OWNER.

STATE OF NEW YORK
CHARLES P. BALLARD
PROFESSIONAL ENGINEER
NOV 18 1997

SCALE 0" 50' 100' 200'

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

REV	DATE	DESCRIPTION	BY	APP'D
7	6-97	MODIFY CELLS 9 THROUGH 14	FAS	CPB
6	4-97	MODIFY CELL 9	FAS	CPB
5	11-96	MODIFY CELLS 7 AND 8	FAS	CPB
4	6-96	MODIFY CELL 6 / 10 AND CELL 6 / 8 TRANSITIONS	FAS	CPB
3	4-96	MODIFY CELL 6 / CELL 10 TRANSITION GRADES	FAS	CPB
2	11-95	MODIFY SUMPS CELLS 5 & AND 7	FAS	CPB
1	6-92	NOTICE OF DEFICIENCY RESPONSES	FLD	CPB

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE

DATE

DES. BY	DRJ/TJP
DRN. BY	FLD
CHK. BY	MGR
ENV. DY	JJD
GRV. BY	CFF
APP. BY	GRM

PROJECT NO. 17365 DATE FEBRUARY 1992

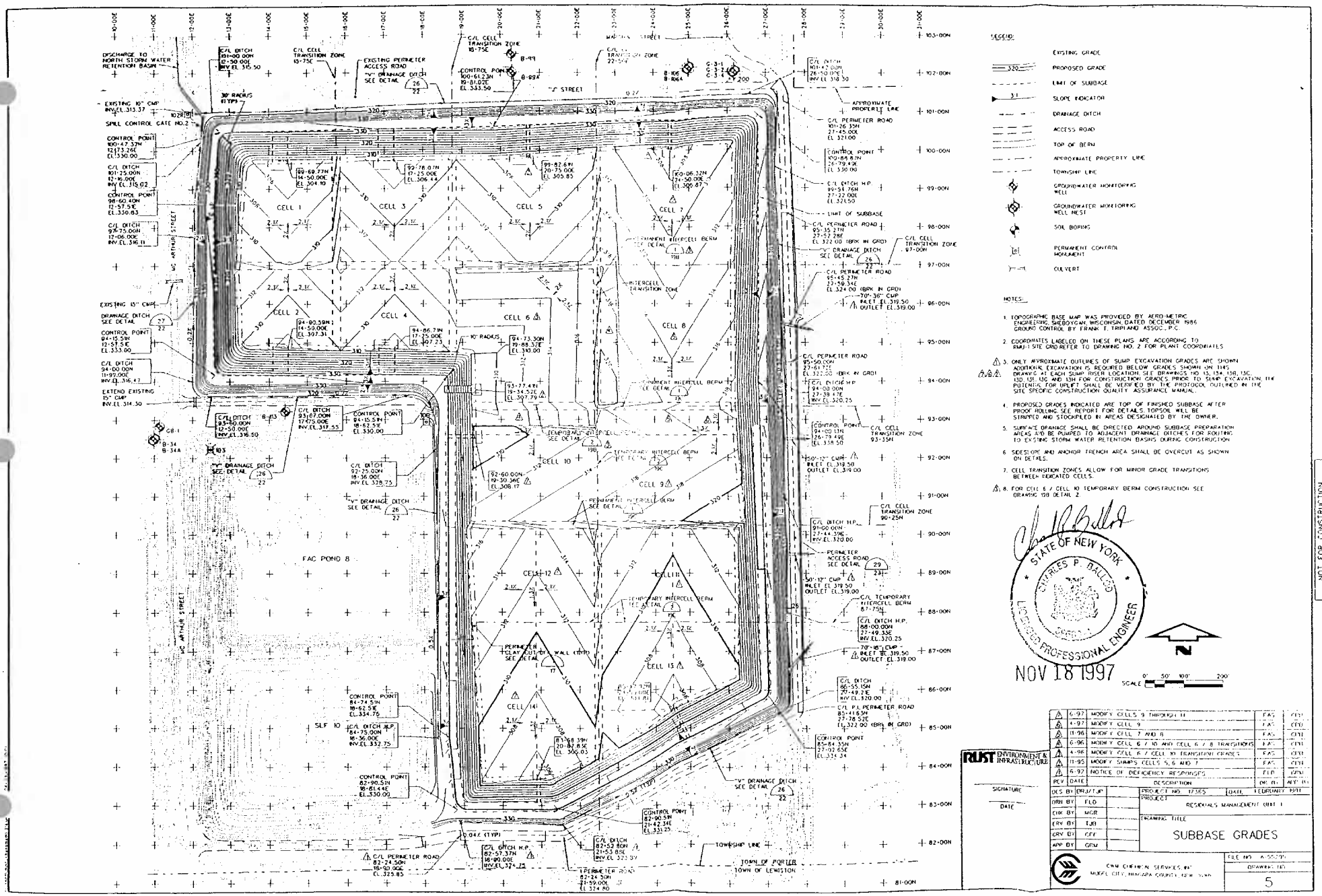
PROJECT: RESIDUALS MANAGEMENT UNIT 1

DRAWING TITLE: EXCAVATION GRADES

OWN CHEMICAL SERVICES, INC
MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. A-55.1MC

DRAWING NO. 4



LEGEND:

- EXISTING GRADE
- 320 PROPOSED GRADE
- LIMIT OF SUBBASE
- 3:1 SLOPE INDICATOR
- DRAINAGE DITCH
- ACCESS ROAD
- TOP OF BERM
- APPROXIMATE PROPERTY LINE
- TOWNSHIP LINE
- GROUNDWATER MONITORING WELL
- GROUNDWATER MONITORING WELL NEST
- SOIL BORING
- PERMANENT CONTROL MONUMENT
- CULVERT

NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK E. TRIPI AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO RMU-1 SITE GRID REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. ONLY APPROXIMATE OUTLINES OF SUMP EXCAVATION GRADES ARE SHOWN. ADDITIONAL EXCAVATION IS REQUIRED BELOW GRADES SHOWN ON THIS DRAWING AT EACH SUMP RISER LOCATION. SEE DRAWINGS NO. 15, 134, 136, 136, 137, 138, 139 AND 139A FOR CONSTRUCTION GRADES PRIOR TO SUMP EXCAVATION. THE POTENTIAL FOR UPLIFT SHALL BE VERIFIED BY THE PROTOCOL OUTLINED IN THE SITE SPECIFIC CONSTRUCTION QUALITY ASSURANCE MANUAL.
4. PROPOSED GRADES INDICATED ARE TOP OF FINISHED SUBBASE AFTER PROOF ROLLING. SEE REPORT FOR DETAILS. TOPSOIL WILL BE STRIPPED AND STOCKPILED IN AREAS DESIGNATED BY THE OWNER.
5. SURFACE DRAINAGE SHALL BE DIRECTED AROUND SUBBASE PREPARATION AREAS AND BE PUMPED TO ADJACENT DRAINAGE DITCHES FOR ROUTING TO EXISTING STORM WATER RETENTION BASINS DURING CONSTRUCTION.
6. SIDESLOPE AND ANCHOR TRENCH AREA SHALL BE OVERCUT AS SHOWN ON DETAILS.
7. CELL TRANSITION ZONES ALLOW FOR MINOR GRADE TRANSITIONS BETWEEN INDICATED CELLS.
8. FOR CELL 6 / CELL 10 TEMPORARY BERM CONSTRUCTION SEE DRAWING 19B DETAIL 2.

STATE OF NEW YORK
CHARLES P. BALLOD
LICENSED PROFESSIONAL ENGINEER
NOV 18 1997

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

REV	DATE	DESCRIPTION	BY	APP'D
6	6-97	MODIFY CELLS 9 THROUGH 11	FAS	CPB
5	4-97	MODIFY CELL 9	FAS	CPB
4	11-96	MODIFY CELL 7 AND 8	FAS	CPB
3	6-96	MODIFY CELL 6 / 10 AND CELL 6 / 8 TRANSITIONS	FAS	CPB
2	4-96	MODIFY CELL 6 / CELL 10 TRANSITION GRADES	FAS	CPB
1	11-95	MODIFY SWAMPS CELLS 5, 6 AND 7	FAS	CPB
0	6-92	NOTICE OF DEFICIENCY RESPONSES	FLD	GPM

RUST ENVIRONMENT & INFRASTRUCTURE

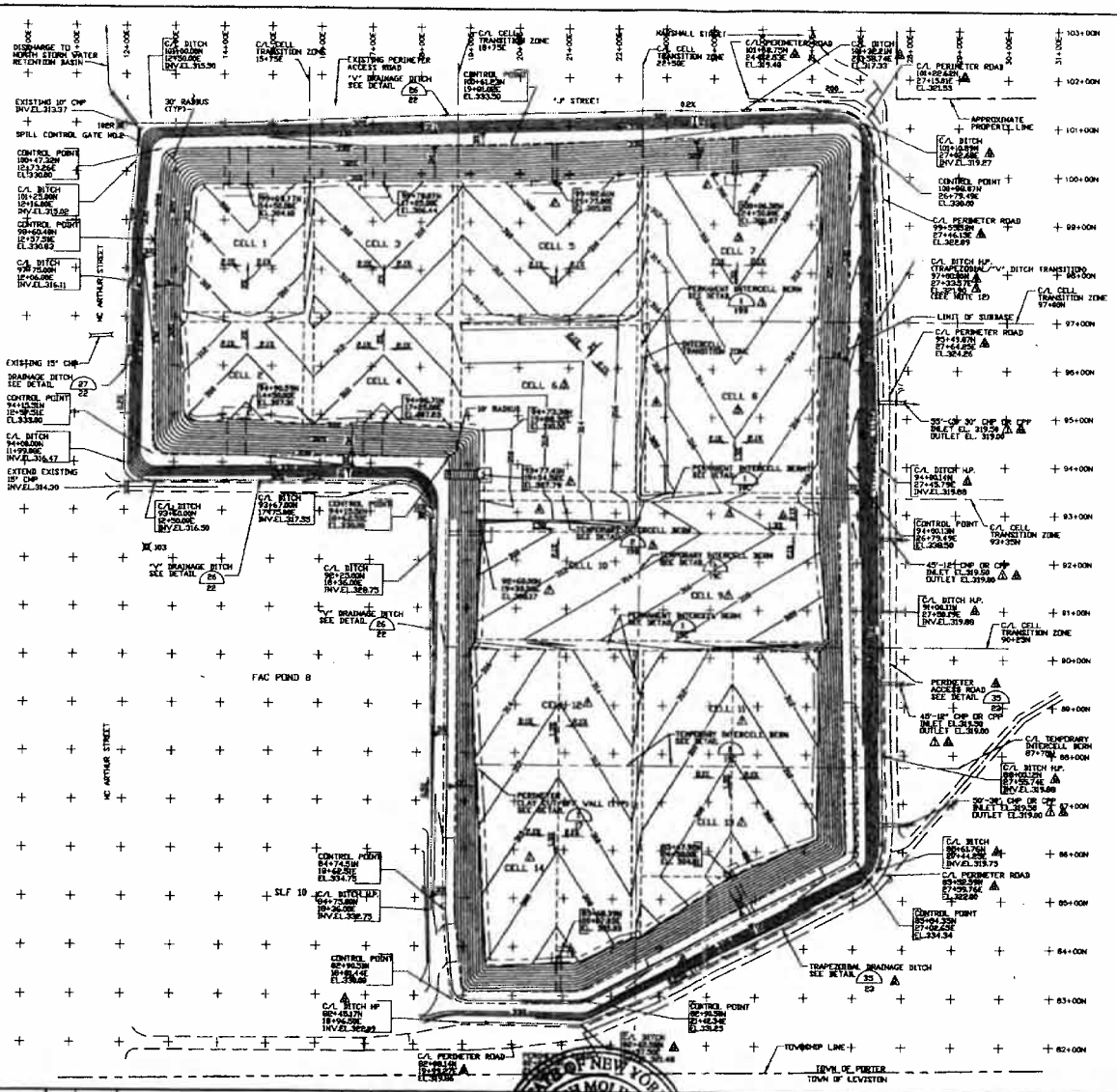
SIGNATURE

DATE

DES BY	DRAFT'D	PROJECT NO. 17365	DATE FEBRUARY 1991
DRN BY	FLD	PROJECT: RESIDUALS MANAGEMENT UNIT 1	
CHK BY	MGR		
ENV BY	TJD	DRAWING TITLE: SUBBASE GRADES	
GRV BY	CPF		
APP BY	GPM		

OMI CHEMICAL SERVICES, INC.
MIDDLE CITY, NIAGARA COUNTY, NEW YORK

FILE NO. A-55279
DRAWING NO. 5



LEGEND:

- EXISTING GRADE
- PROPOSED GRADE
- LIMIT OF SUBBASE
- SLOPE INDICATOR
- DRAINAGE DITCH
- ACCESS ROAD
- TOP OF BERM
- APPROXIMATE PROPERTY LINE
- TOWNSHIP LINE
- PERMANENT CONTROL MONUMENT
- CULVERT

NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1988. GROUND CONTROL BY FRANK T. [illegible] AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO NAD-1 SITE GRID. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. ONLY APPROXIMATE OUTLINES OF SUMP EXCAVATION GRADES ARE SHOWN. ADDITIONAL EXCAVATION IS REQUIRED BELOW GRADES SHOWN ON THIS DRAWING AT EACH SUMP WHERE LOCATION, SIZE DIMENSIONS WILL 13, 13A, 13B, 13C, 13D, 13E, 13K AND 13N FROM CONSTRUCTION GRADES, PRIOR TO SUMP EXCAVATION, THE POTENTIAL FOR UPLIFT SHALL BE VERIFIED BY THE PROTOCOL OUTLINED IN THE SITE SPECIFIC CONSTRUCTION QUALITY ASSURANCE MANUAL.
4. PROPOSED GRADES INDICATED ARE TOP OF FINISHED SUBBASE AFTER PROOF ROLLING. SEE REPORT FOR DETAILS. TOPSOIL WILL BE STRIPPED AND STOCKPILED IN AREAS DESIGNATED BY THE OWNER.
5. SURFACE DRAINAGE SHALL BE DIRECTED AROUND SUBBASE PREPARATION AREAS AND BE PUMPED TO ADJACENT DRAINAGE DITCHES FOR ROUTING TO EXISTING STORM WATER RETENTION BASINS DURING CONSTRUCTION.
6. SIDESLOPE AND ANCHOR TRENCH AREA SHALL BE OVERCUT AS SHOWN ON DETAILS.
7. CELL TRANSITION ZONES ALLOW FOR MINOR GRADE TRANSITIONS BETWEEN INDICATED CELLS.
8. FOR CELL 6 / CELL 10 TEMPORARY BERM CONSTRUCTION SEE DRAWING 19B DETAIL 2.
9. THIS DRAWING IS BASED ON A DRAWING ENTITLED "SUBBASE GRADES", PREPARED BY EARTH TECH (FILE NO. A-65286 DATED FEBRUARY 1997).
10. PRIOR REVISIONS BY EARTH TECH INCLUDE THE FOLLOWING:
    1. NOTICE OF DEFICIENCY RESPONSES (DATED 8/92, DRAWN BY FLD, APPROVED BY CRM).
    2. MODIFY SUMPS CELLS 5, 6 AND 7 (DATED 11/95, DRAWN BY FAS, APPROVED BY CPB).
    3. MODIFY CELL 6/CELL 10 TRANSITION GRADES (DATED 4/96, DRAWN BY FAS, APPROVED BY JPB).
    4. MODIFY CELL 6/10 AND CELL 6/9 TRANSITIONS. (DATED 6/96, DRAWN BY FAS, APPROVED BY CPB).
    5. MODIFY CELL 7 AND 8 (DATED 11/96, DRAWN BY FAS, APPROVED BY CPB).
    6. MODIFY CELL 9 (DATED 4/97, DRAWN BY FAS, APPROVED BY CPB).
    7. MODIFY CELLS 9 THROUGH 14 (DATED 8/97, DRAWN BY FAS, APPROVED BY CPB).
11. ORIGINAL SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.
12. USE GENERAL FILL MATERIAL TO CREATE MOUND IN PERIMETER CHANNEL AT HIGH POINT LOCATION. TOP ELEVATION OF MOUND WILL BE 321.90. DITCH INVERT ELEVATION IMMEDIATELY UPSTREAM AND IMMEDIATELY DOWNSTREAM OF MOUND WILL BE 319.90.

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER. WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

K: 05043103.DWG
L: ON=*, OFF=*REF*
P: PAGESET/ PLT-ODL-36
11/18/03 SYS-85-KMD LAF MES ROC-85-SLM
05043005/05043003.DWG

Graphic Scale

No.	Date	Revisions	Init
1	12/03	REV. TO PERIMETER DITCH HIGH POINT	
0	8/03	REV. TO PERIMETER DITCH, ACCESS ROAD, AND CULVERTS	
		SEE NOTE 10 FOR PRIOR REVISIONS	

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THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. MODIFICATIONS BY THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

Project Mgr. JJF
Designed by RMS/CAA
Drawn by SLM
Checked by PJB
Prof. Eng. JOSEPH MOLINA III
PE License NY 072644

STATE OF NEW YORK — JOSEPH MOLINA III — 072644 — PROFESSIONAL ENGINEER

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

CWM CHEMICAL SERVICES, L.L.C. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

SUBBASE GRADES

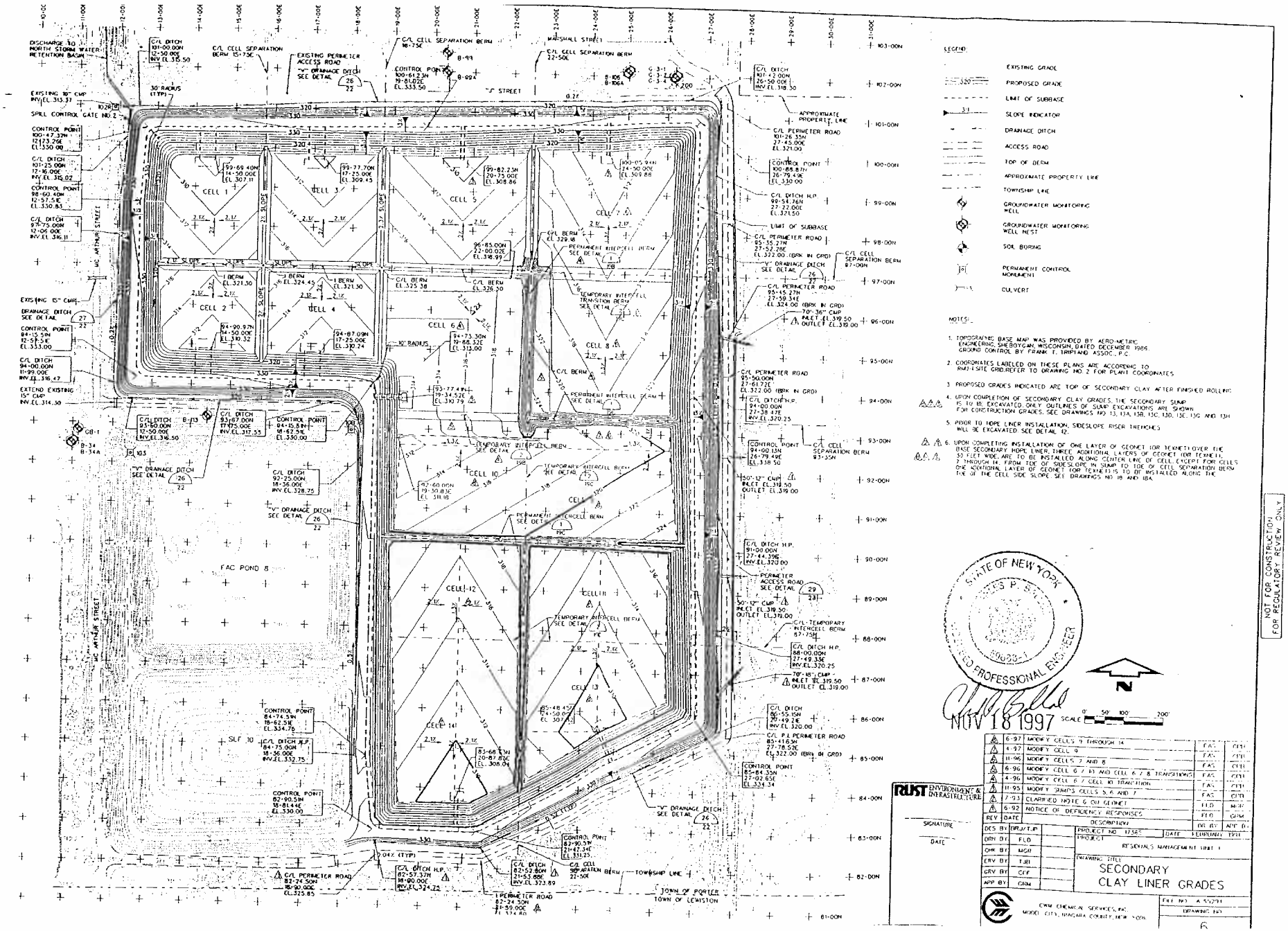
GENERAL

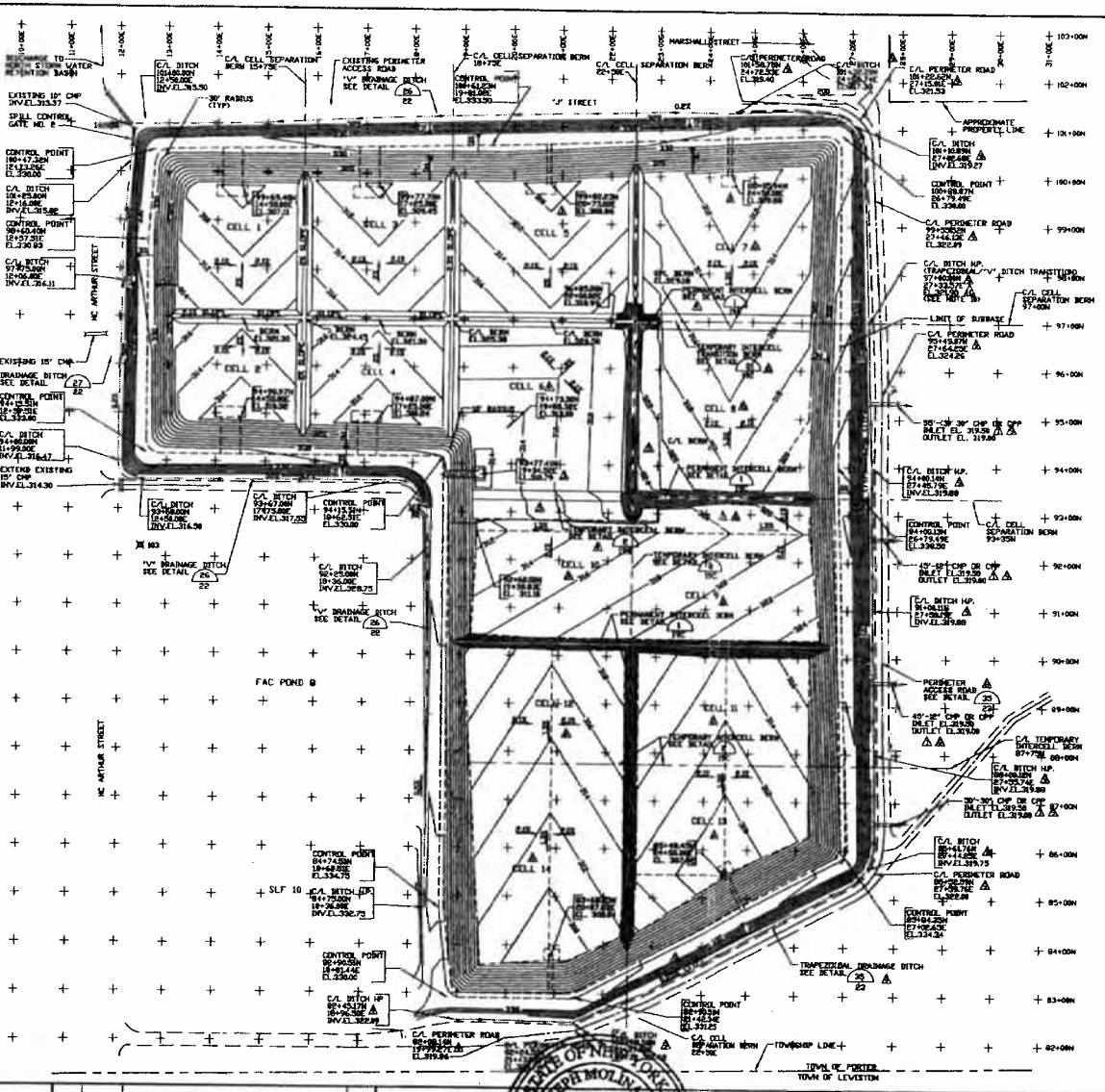
Modified: 07/09

File Number 050.42
Date DECEMBER 2003

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

5-a


LEGEND
EXISTING GRADE
PROPOSED GRADE
LIMIT OF SUBBASE
SLOPE INDICATOR
DRAINAGE DITCH
ACCESS ROAD
TOP OF BERM
APPROXIMATE PROPERTY LINE
TOWNSHIP LINE
GROUNDWATER MONITORING WELL
GROUNDWATER MONITORING WELL NEST
SOIL BORING
PERMANENT CONTROL MONUMENT
CULVERT
NOTES:
1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK T. TIRPAND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO RUST-SITE GRID.REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF SECONDARY CLAY AFTER FINISHED ROLLING.
4. UPON COMPLETION OF SECONDARY CLAY GRADES, THE SECONDARY SUMP IS TO BE EXCAVATED. ONLY OUTLINES OF SUMP EXCAVATIONS ARE SHOWN FOR CONSTRUCTION GRADES. SEE DRAWINGS NO 13, 13A, 13B, 13C, 13D, 13E, 13G AND 13H.
5. PRIOR TO HDPE LINER INSTALLATION, SIDESLOPE RISER TRENCHES WILL BE EXCAVATED. SEE DETAIL 12.
6. UPON COMPLETING INSTALLATION OF ONE LAYER OF GEONET (OR TENAX) OVER THE BASE SECONDARY HDPE LINER, THREE ADDITIONAL LAYERS OF GEONET (OR TENAX), 7 THROUGH 14, FROM TOP OF SIDESLOPE IN SUMP TO TOE OF CELL SEPARATION BERM ONE ADDITIONAL LAYER OF GEONET (OR TENAX) IS TO BE INSTALLED ALONG THE PIPE OF THE CELL SIDE SLOPE. SEE DRAWINGS NO 18 AND 18A.
STATE OF NEW YORK
LICENSED PROFESSIONAL ENGINEER
NOV 18 1997
SCALE 0' 50' 100' 200'
NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY
RUST ENVIRONMENT & INFRASTRUCTURE
SIGNATURE
DATE
6-97 MODIFY CELLS 9 THROUGH 14
4-97 MODIFY CELL 9
11-96 MODIFY CELLS 7 AND 8
6-96 MODIFY CELL 6 / #1 AND CELL 6 / 8 TRANSITIONS
4-96 MODIFY CELL 6 / CELL 10 TRANSITION
11-95 MODIFY SUMPS CELLS 5, 6, AND 7
7-93 CLARIFIED NOTE 6 ON GEONET
6-92 NOTICE OF DEFICIENCY RESPONSES
REV DATE DESCRIPTION
DES BY DRAFT BP
DRN BY FLD
CHK BY MGR
ENV BY TJH
GRV BY CFF
APP BY GRM
PROJECT NO. 17565
DATE FEBRUARY 1997
PROJECT RESIDUALS MANAGEMENT UNIT 1
DRAWING TITLE SECONDARY CLAY LINER GRADES
CWM CHEMICAL SERVICES, INC. MODEL CITY, NIAGARA COUNTY, NEW YORK
FILE NO. A 552791
DRAWING NO. 6



NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1988. GROUND CONTROL BY FRANK T. TREPS AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO NAD-1 SITE GRID. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF SECONDARY CLAY AFTER FINISHED ROLLING.
4. UPON COMPLETION OF SECONDARY CLAY GRADES, THE SECONDARY SUMP IS TO BE EXCAVATED. ONLY OUTLINES OF SUMP EXCAVATIONS ARE SHOWN. FOR CONSTRUCTION GRADES, SEE DRAWINGS NO. 13, 13A, 13B, 13C, 13D, 13E, 13G AND 13H.
5. PRIOR TO HDPE LINER INSTALLATION, SIDESLOPE RISER TRENCHES WILL BE EXCAVATED. SEE DETAIL 12.
4. UPON COMPLETING INSTALLATION OF ONE LAYER OF GEONET (OR TENSET) OVER THE BASE SECONDARY HDPE LINER, THREE ADDITIONAL LAYERS OF GEONET (OR TENSET), 30 FEET WIDE, ARE TO BE INSTALLED ALONG CENTER LINE OF CELL, EXCEPT FOR CELLS 7 THROUGH 14, FROM TOE OF SIDESLOPE IN SUMP TO TOE OF CELL SEPARATION BERM. ONE ADDITIONAL LAYER OF GEONET (OR TENSET) IS TO BE INSTALLED ALONG THE TOE OF THE CELL SIDE SLOPE. SEE DRAWINGS NO. 16 AND 18A.
7. THIS DRAWING IS BASED ON A DRAWING ENTITLED "SECONDARY CLAY LINER GRADES", PREPARED BY EARTH TECH (TYLE NO. A-35284 DATED FEBRUARY 1991).
8. PRIOR REVISIONS BY EARTH TECH INCLUDE THE FOLLOWING:
   1. NOTICE OF DEFICIENCY RESPONSES (DATED 6/92, DRAWN BY FLD, APPROVED BY GRM).
   2. CLARIFIED NOTE 8 ON GEONET (DATED 7/93, DRAWN BY FLD, APPROVED BY MGR).
   3. MODIFY SUMPS CELLS 5, CLAND 7 (DATED 11/93, DRAWN BY FAS, APPROVED BY CPB).
   4. MODIFY CELL 4/CELL 10 TRANSITION (DATED 4/94, DRAWN BY FAS, APPROVED BY CPB).
   5. MODIFY CELL 6/10 AND CELL 6/8 TRANSITIONS. (DATED 6/94, DRAWN BY FAS, APPROVED BY CPB).
   6. MODIFY CELLS 7 AND 8 (DATED 11/94, DRAWN BY FAS, APPROVED BY CPB).
   7. MODIFY CELL 9 (DATED 4/97, DRAWN BY FAS, APPROVED BY CPB).
   8. MODIFY CELLS 9 THROUGH 14 (DATED 8/97, DRAWN BY FAS, APPROVED BY CPB).
9. BBL SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.
10. USE GENERAL FILL MATERIAL TO CREATE MOUND IN PERIMETER CHANNEL AT HIGH POINT LOCATION. TOP ELEVATION OF MOUND WILL BE 321.9G. DITCH INVERT ELEVATION IMMEDIATELY UPSTREAM AND IMMEDIATELY DOWNSTREAM OF MOUND WILL BE 319.90.

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER, WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

X: 05050200.DWG, 05042003.DWG
L: ON=* OFF=REF*
P: PAGESET/PLT-COL-38
12/15/03 SYR-BS-MES LAF MES ROC-BS-SLN
05042006/08042004.DWG

Drawing Scale: 100' 0 100' 200'

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init
2	12/03	REV. TO PERIMETER DITCH HIGH POINT	
1	8/03	REV. TO PERIMETER DITCH, ACCESS ROAD, AND CULVERTS	
		SEE NOTE 8 FOR PRIOR REVISIONS	

Project Mgr. TF
Designed by BMS/CAA
Drawn by SLH
Checked by PHP
Prof. Eng. JOSEPH MOLINA
PE License NY 072644

STATE OF NEW YORK — JOSEPH MOLINA III — 072644 — PROFESSIONAL ENGINEER

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

CWM CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

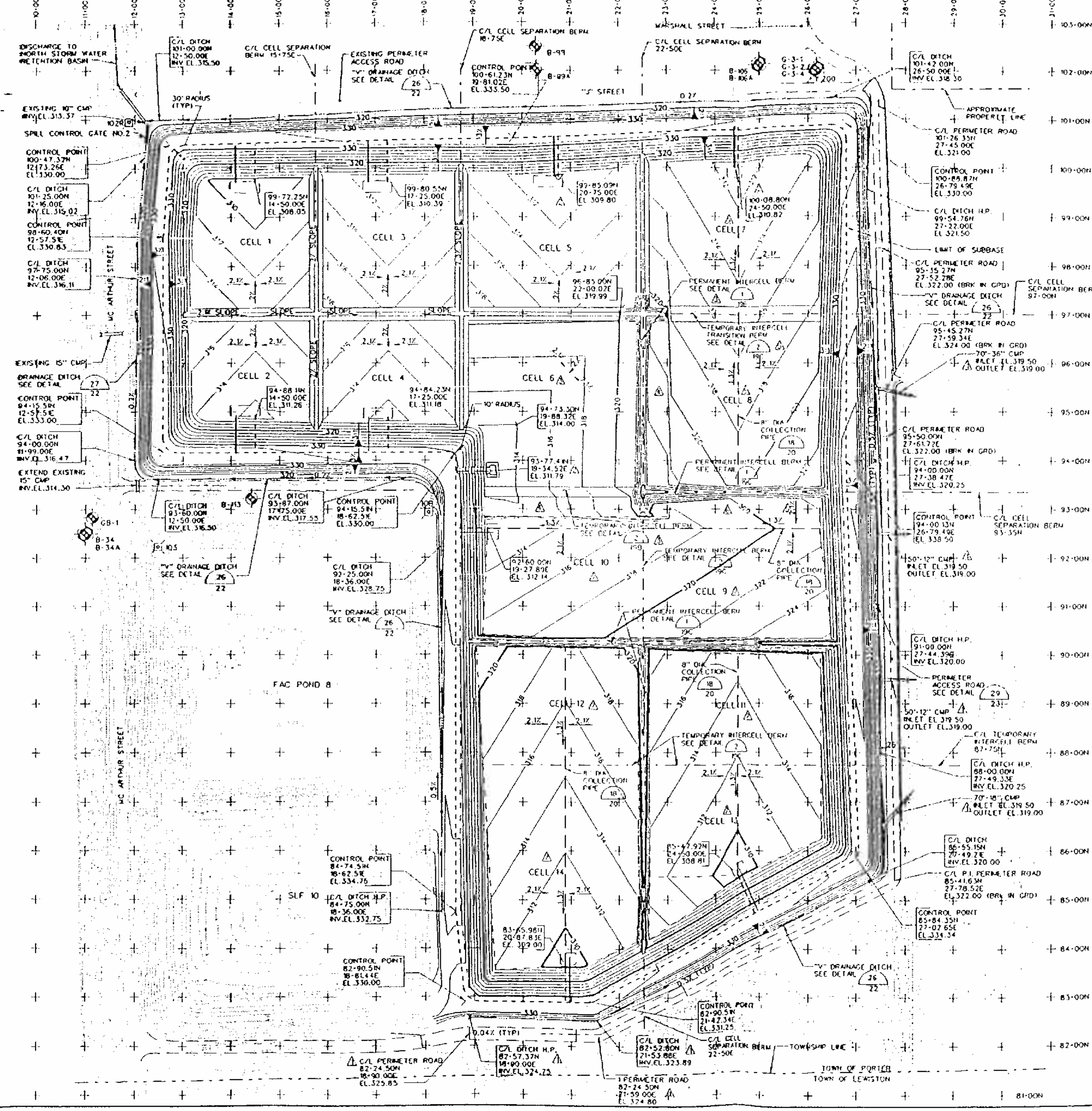
SECONDARY CLAY LINER GRADES

GENERAL Modified: 07/09

File Number 050.42
Date JUNE 2003

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

6-a



LEGEND

	EXISTING GRADE
320	PROPOSED GRADE
	LIMIT OF SUBBASE
3:1	SLOPE INDICATOR
	DRAINAGE DITCH
	ACCESS ROAD
	TOP OF BERM
	APPROXIMATE PROPERTY LINE
	TOWNSHIP LINE
	GROUNDWATER MONITORING WELL
	GROUNDWATER MONITORING WELL NEST
	SOIL BORING
	PERMANENT CONTROL MONUMENT
	CULVERT

NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK E. TRIPI AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO RMU-1 SITE GRID REFER TO DRAWING NO. 2 FOR PLANT COORDINATES
3. PROPOSED GRADES INDICATED ARE TOP OF SECONDARY LEACHATE GRANULAR LAYER. THE SIDESLOPE SECONDARY LEACHATE COLLECTION SYSTEM IS GEONET (OR TEXNET) THEREFORE, SIDESLOPE CONTOURS HAVE NOT CHANGED FROM GRADES SHOWN ON DRAWING NO 6.
4. ONLY OUTLINES OF COMPLETED SECONDARY SUMPS ARE SHOWN FOR SUMP CONSTRUCTION GRADES SEE DRAWINGS NO. 13, 13A, 13B 13C, 13D, 13E, 13G AND 13H

STATE OF [illegible] LICENSED PROFESSIONAL ENGINEER 59688-1

NOV 18 1997

N

SCALE 0' 50' 100' 200'

NOT FOR CONSTRUCTION FOR REGULATORY REVIEW ONLY

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE

DATE

REV	DATE	DESCRIPTION	DR BY	APP BY
△	6-97	MODIFY CELLS 9 THROUGH 14	FAS	[illegible]
△	4-97	MODIFY CELL 9	FAS	[illegible]
△	11-96	MODIFY CELLS 7 AND 8	FAS	[illegible]
△	6-96	MODIFY CELL 6 / 10 AND CELL 6 / 8 TRANSITIONS	FAS	[illegible]
△	4-96	MODIFY CELL 6 / CELL 10 TRANSITION GRADES	FAS	[illegible]
△	11-95	MODIFY SUMPS CELLS 5, 6 AND 7	FAS	[illegible]
△	5-92	NOTICE OF DEFICIENCY RESPONSES	FED	[illegible]

DES BY	[illegible]
DRN BY	FED
CHK BY	MCR
ENV BY	TJB
GPV BY	CFF
APP BY	GRM

PROJECT NO. 17565 DATE [illegible]

PROJECT: RESIDUALS MANAGEMENT UNIT 1

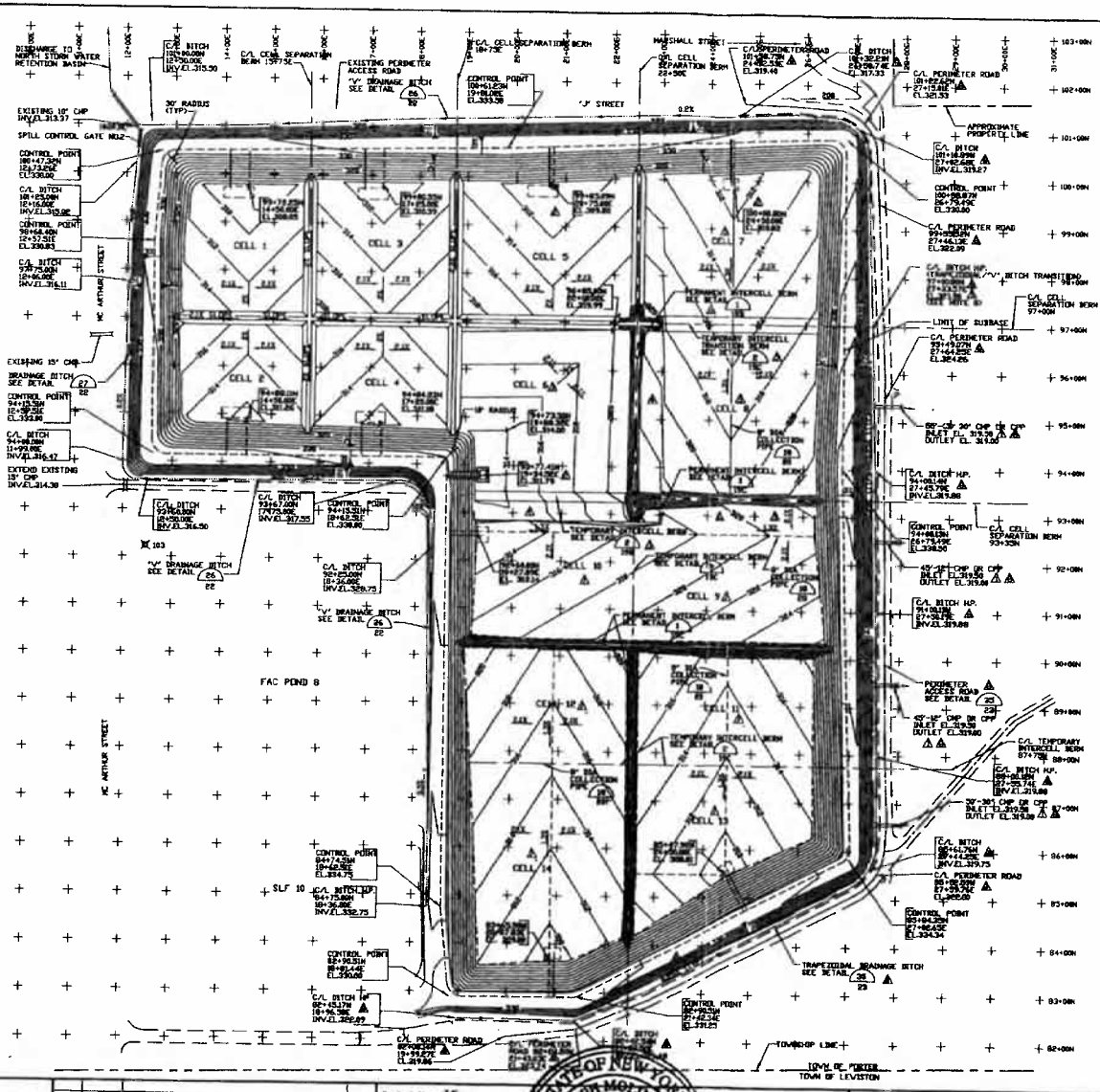
DRAWING TITLE

SECONDARY LEACHATE GRANULAR LAYER GRADES

CWM CHEMICAL SERVICES, INC. MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. [illegible]

DRAWING NO. 7



NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1988. GROUND CONTROL BY FRANK T. SRIPE AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO NAD-1 1976 ARCS. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF SECONDARY LEACHATE GRANULAR LAYER. THE SIDESLOPE SECONDARY LEACHATE COLLECTION SYSTEM IS GEONET, (OR SIMILAR) THEREFORE, SIDESLOPE CONTOURS HAVE NOT CHANGED FROM GRADES SHOWN ON DRAWING NO. 6.
4. ONLY OUTLINES OF COMPLETED SECONDARY SUMPS ARE SHOWN. FOR SUMP CONSTRUCTION GRADES SEE DRAWINGS NO. 12, 12A, 12B 12C, 13B, 13C, 13D AND 13H.
5. THIS DRAWING IS BASED ON A DRAWING ENTITLED "SECONDARY LEACHATE GRANULAR LAYER GRADES", PREPARED BY EARTH TECH (FILE NO. A-55293 DATED FEBRUARY 1991).
6. PRIOR REVISIONS BY EARTH TECH INCLUDE THE FOLLOWING:
   1. NOTICE OF DEFICIENCY RESPONSES (DATED 6/92, DRAWN BY FJD, APPROVED BY GRM).
   2. MODIFY SUMPS CELLS 5, 6 AND 7 (DATED 11/93, DRAWN BY FAS, APPROVED BY CPB).
   3. MODIFY CELL 6/CELL 10 TRANSITION GRADES (DATED 4/96, DRAWN BY FAS, APPROVED BY CPB).
   4. MODIFY CELL 6/10 AND CELL 9/8 TRANSITIONS. (DATED 6/96, DRAWN BY FAS, APPROVED BY CPB.)
   5. MODIFY CELL 7 AND 8 (DATED 11/96, DRAWN BY FAS, APPROVED BY CPB).
   6. MODIFY CELL 9 (DATED 4/97, DRAWN BY FAS, APPROVED BY CPB).
   7. MODIFY CELLS 9 THROUGH 14 (DATED 6/97, DRAWN BY FAS, APPROVED BY CPB).
7. BBL SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.
8. USE GENERAL FILL MATERIAL TO CREATE MOUND IN PERIMETER CHANNEL AT HIGH POINT LOCATION. TOP ELEVATION OF MOUND WILL BE 321.90. DITCH INVERT ELEVATION IMMEDIATELY UPSTREAM AND IMMEDIATELY DOWNSTREAM OF MOUND WILL BE 319.90.

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER. WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

I:\ 05004\003.DWG, 05042X03.DWG
L: ON=* OFF=*REF*
P: PAGESET/PLT-COL-36
12/19/03 SVR-85-NES ROC-85-SLM
05042X03/05042S03.DWG

Graphic Scale

No.	Date	Revisions
2	12/03	REV. TO PERIMETER DITCH HIGH POINT
1	6/03	REV. TO PERIMETER DITCH, ACCESS ROAD, AND CULVERTS; SEE NOTE 6 FOR PRIOR REVISIONS

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Project Mgr. TJF
Designed by SNS/CAA
Drawn by SLM
Checked by PJB
Prof. Eng. JOSEPH MOLINA
PE License NY 072644

JOSEPH MOLINA III — STATE OF NEW YORK — 072644 — PROFESSIONAL ENGINEER

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

CWM CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

SECONDARY LEACHATE GRANULAR LAYER GRADES

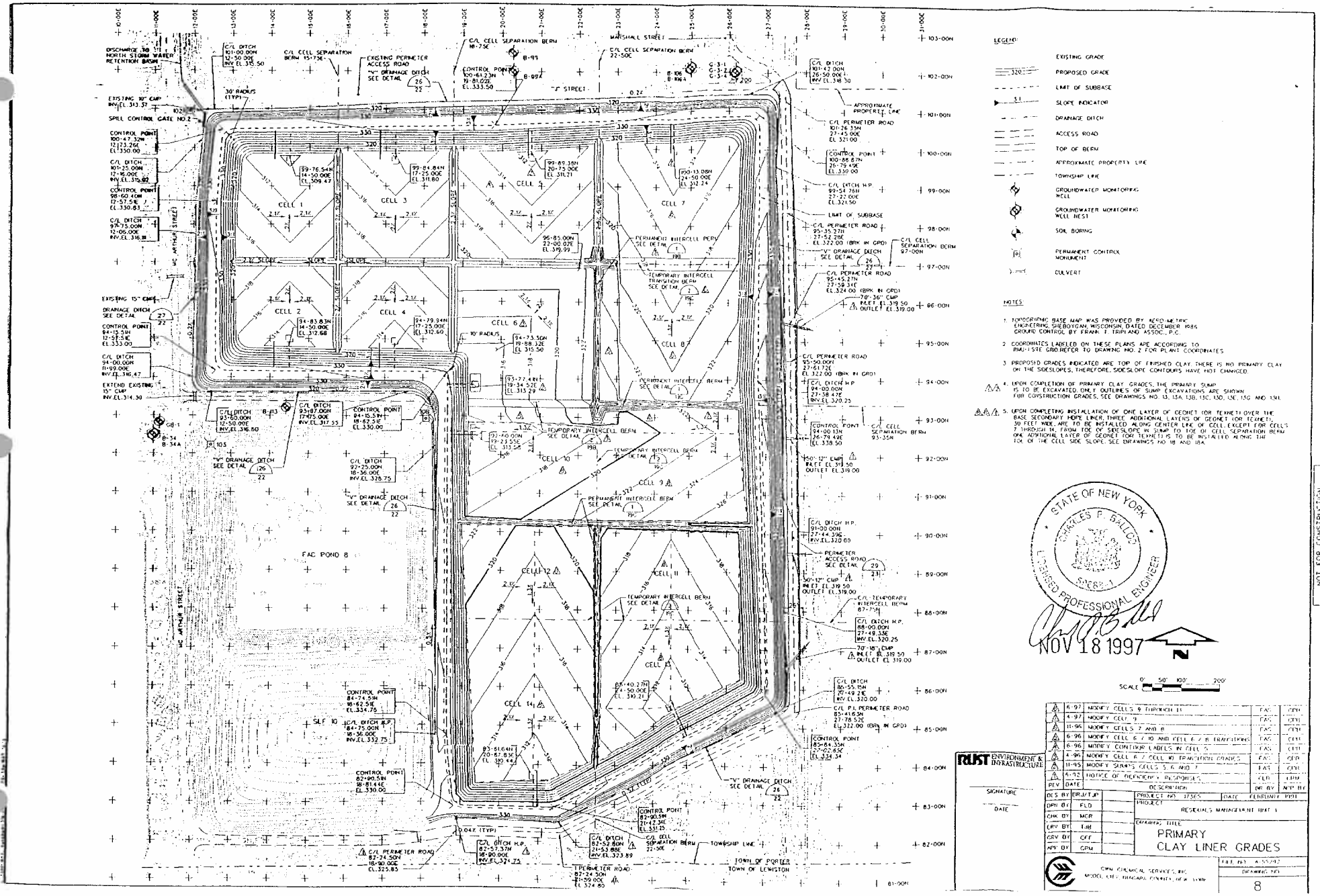
Modified: 07/09

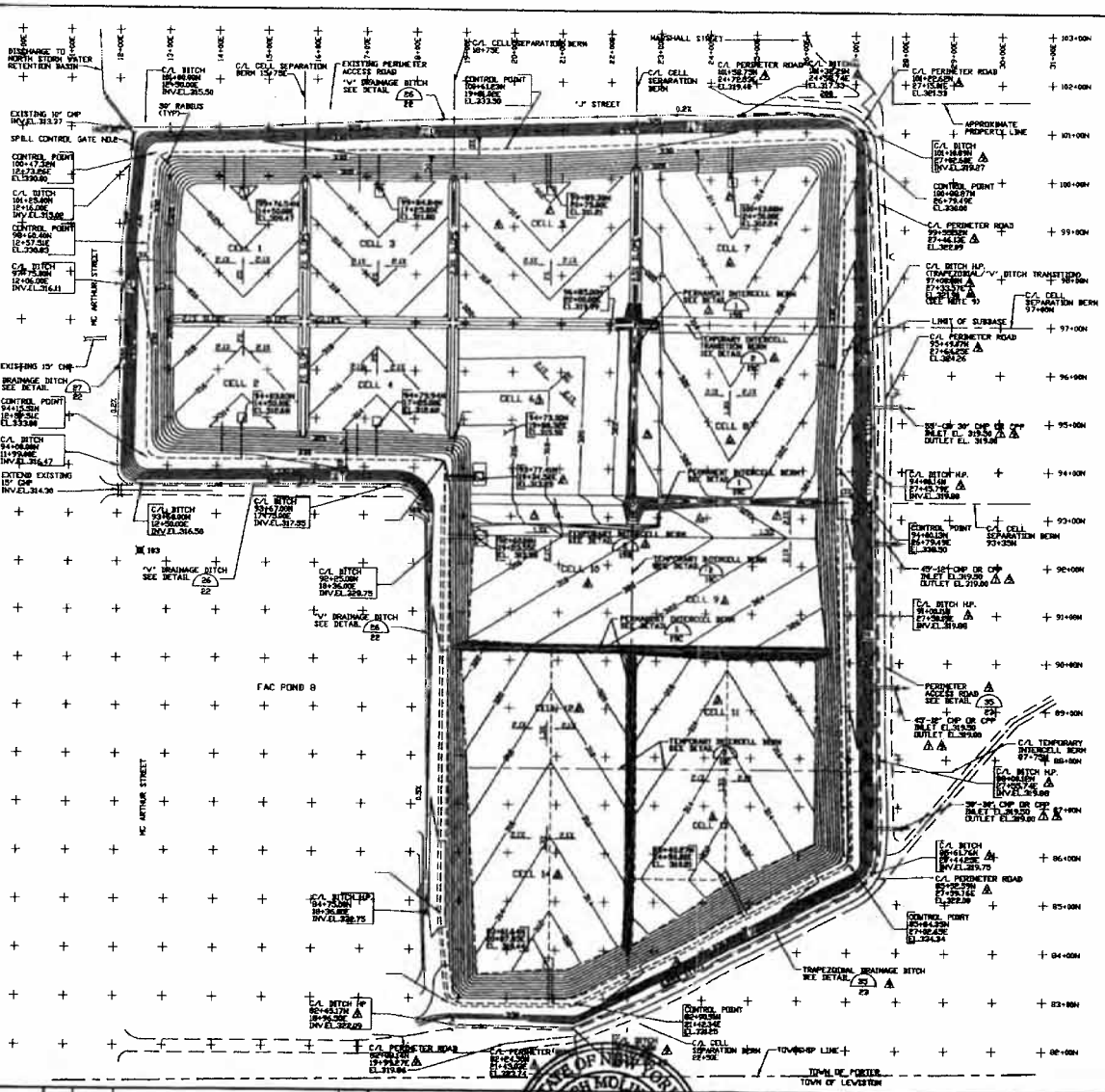
GENERAL

File Number 050.42
Date JUNE 2003

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

7-a


CELL 1
CELL 2
CELL 3
CELL 4
CELL 5
CELL 6
CELL 7
CELL 8
CELL 9
CELL 10
CELL 11
CELL 12
CELL 13
CELL 14
FAC POND 8
"V" STREET
MARSHALL STREET
MC ARTHUR STREET
SLF 10
TOWNSHIP LINE
TOWN OF PORTER
TOWN OF LEWISTON
LEGEND:
EXISTING GRADE
PROPOSED GRADE
LIMIT OF SUBBASE
SLOPE INDICATOR
DRAINAGE DITCH
ACCESS ROAD
TOP OF BERM
APPROXIMATE PROPERTY LINE
TOWNSHIP LINE
GROUNDWATER MONITORING WELL
GROUNDWATER MONITORING WELL NEST
SOIL BORING
PERMANENT CONTROL MONUMENT
CULVERT
NOTES
1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY KEDD-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK T. TRIPLAND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO RMI-SITE GRID REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF FINISHED CLAY. THERE IS NO PRIMARY CLAY ON THE SIDESLOPES, THEREFORE, SIDESLOPE CONTOURS HAVE NOT CHANGED.
4. UPON COMPLETION OF PRIMARY CLAY GRADES, THE PRIMARY SUMP IS TO BE EXCAVATED. ONLY OUTLINES OF SUMP EXCAVATIONS ARE SHOWN FOR CONSTRUCTION GRADES. SEE DRAWINGS NO. 13, 13A, 13B, 13C, 13D, 13E, 13G AND 13H.
5. UPON COMPLETING INSTALLATION OF ONE LAYER OF GEONET (OR TEXNET) OVER THE BASE SECONDARY HDPE LINER, THREE ADDITIONAL LAYERS OF GEONET (OR TEXNET), 30 FEET WIDE, ARE TO BE INSTALLED ALONG CENTER LINE OF CELL EXCEPT FOR CELLS 7 THROUGH 14, FROM TOE OF SIDESLOPE IN SUMP TO TOE OF CELL SEPARATION BERM. ONE ADDITIONAL LAYER OF GEONET (OR TEXNET) IS TO BE INSTALLED ALONG THE TOE OF THE CELL SIDE SLOPE. SEE DRAWINGS NO 18 AND 18A.
STATE OF NEW YORK
CHARLES P. BALLOU
LICENSED PROFESSIONAL ENGINEER
NOV 18 1997
SCALE 0 50' 100' 200'
NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY
RUST ENVIRONMENT & INFRASTRUCTURE
SIGNATURE
DATE
6-97 MODIFY CELLS 9 THROUGH 11 FAC GPH
4-97 MODIFY CELL 9 FAC GPH
11-96 MODIFY CELLS 7 AND 8 FAC GPH
6-96 MODIFY CELL 6 / 10 AND CELL 6 / 8 TRANSITIONS FAC GPH
6-96 MODIFY CONTOUR LABELS IN CELL 5 FAC GPH
4-96 MODIFY CELL 6 / CELL 10 TRANSITION GRADES FAC GPH
11-95 MODIFY SUMPS CELLS 5, 6 AND 7 FAT GPH
4-92 NOTICE OF DEFICIENCY RESPONSES FLD GPH
REV DATE DESCRIPTION DR BY APP BY
DES BY DRJ/TJP
DFN BY FLD
CHK BY MCR
QRY BY TJR
QRY BY GPH
APP BY GPH
PROJECT NO. 17365 DATE FEBRUARY 1991
PROJECT RESIDUALS MANAGEMENT UNIT 1
DRAWING TITLE PRIMARY CLAY LINER GRADES
OMI CHEMICAL SERVICES, INC. MODEL CITY, NIAGARA COUNTY, NEW YORK
FILE NO. A-55742
DRAWING NO. 8



NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK T. TIRPI AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO NAD-1 SITE GRID. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF FINISHED CLAY. THERE IS NO PRIMARY CLAY ON THE SIDESLOPES, THEREFORE, SIDESLOPE CONTOURS HAVE NOT CHANGED.
4. UPON COMPLETION OF PRIMARY CLAY GRADES, THE PRIMARY SUMP IS TO BE EXCAVATED. ONLY OUTLINES OF SUMP EXCAVATIONS ARE SHOWN FOR CONSTRUCTION GRADES. SEE DRAWINGS NO. 13, 13A, 13B, 13C, 13D, 13E, 13G AND 13H.
5. UPON COMPLETING INSTALLATION OF ONE LAYER OF GEOMET (OR TECHNET) OVER THE BASE SECONDARY HDPE LINER, THREE ADDITIONAL LAYERS OF GEOMET (OR TECHNET), 30 FEET WIDE, ARE TO BE INSTALLED ALONG CENTER LINE OF CELL, EXCEPT FOR CELLS 7 THROUGH 14, FROM TOE OF INSIDESLOPE IN SUMP TO TOE OF CELL SEPARATION BERM. ONE ADDITIONAL LAYER OF GEOMET (OR TECHNET) IS TO BE INSTALLED ALONG THE TOE OF THE CELL SIDE SLOPE. SEE DRAWINGS NO. 18 AND 18A.
6. THIS DRAWING IS BASED ON A DRAWING ENTITLED "PRIMARY CLAY LINER GRADES", PREPARED BY EARTH TECH (FILE NO. A-55692 DATED FEBRUARY 1991).
7. PRIOR REVISIONS BY EARTH TECH INCLUDE THE FOLLOWING:
   1. NOTICE OF DEFICIENCY RESPONSES (DATED 6/92, DRAWN BY FLD, APPROVED BY GRM).
   2. MODIFY SUMPS CELLS 5, 6 AND 7 (DATED 11/95, DRAWN BY FAS, APPROVED BY CPB).
   3. MODIFY CELL 6/CELL 10 TRANSITION GRADES (DATED 4/96, DRAWN BY FAS, APPROVED BY CPB).
   4. MODIFY CONTOUR LABELS IN CELL 5 (DATED 6/96, DRAWN BY FAS, APPROVED BY CPB).
   5. MODIFY CELL 8/10 AND CELL 8/8 TRANSITIONS. (DATED 8/96, DRAWN BY FAS, APPROVED BY CPB.)
   6. MODIFY CELL 7 AND 8 (DATED 11/96, DRAWN BY FAS, APPROVED BY CPB).
   7. MODIFY CELL 9 (DATED 4/97, DRAWN BY FAS, APPROVED BY CPB).
   8. MODIFY CELLS 9 THROUGH 14 (DATED 6/97, DRAWN BY FAS, APPROVED BY CPB).
8. SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.
9. USE GENERAL FILL MATERIAL TO CREATE MOUND IN PERIMETER CHANNEL AT HIGH POINT LOCATION. TOP ELEVATION OF MOUND WILL BE 321.90. DITCH INVERT ELEVATION IMMEDIATELY UPSTREAM AND IMMEDIATELY DOWNSTREAM OF MOUND WILL BE 319.90.

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER. WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

X: 05004X00.DWG, 05043X03.DWG
L: ON=* OFF=*REF*
P: PAOESKT/PLT-COL-36
12/10/03 SYR-BS-MEX ROC-BS-MLM
05042006/05042008.DWG

Graphic Scale

No.	Date	Revisions
1	11/02	REV. TO PERIMETER DITCH HIGH POINT
2	8/03	REV. TO PERIMETER DITCH, ACCESS ROAD, AND CULVERTS SEE NOTE 7 FOR PRIOR REVISIONS

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. MANUFACTURERS IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

Project Mgr. TJF
Designed by JWS/CAA
Drawn by SLM
Checked by PHB
Prof. Eng. JOSEPH MOLINA
PE License NY 072644

STATE OF NEW YORK JOSEPH MOLINA III 072644 PROFESSIONAL ENGINEER

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

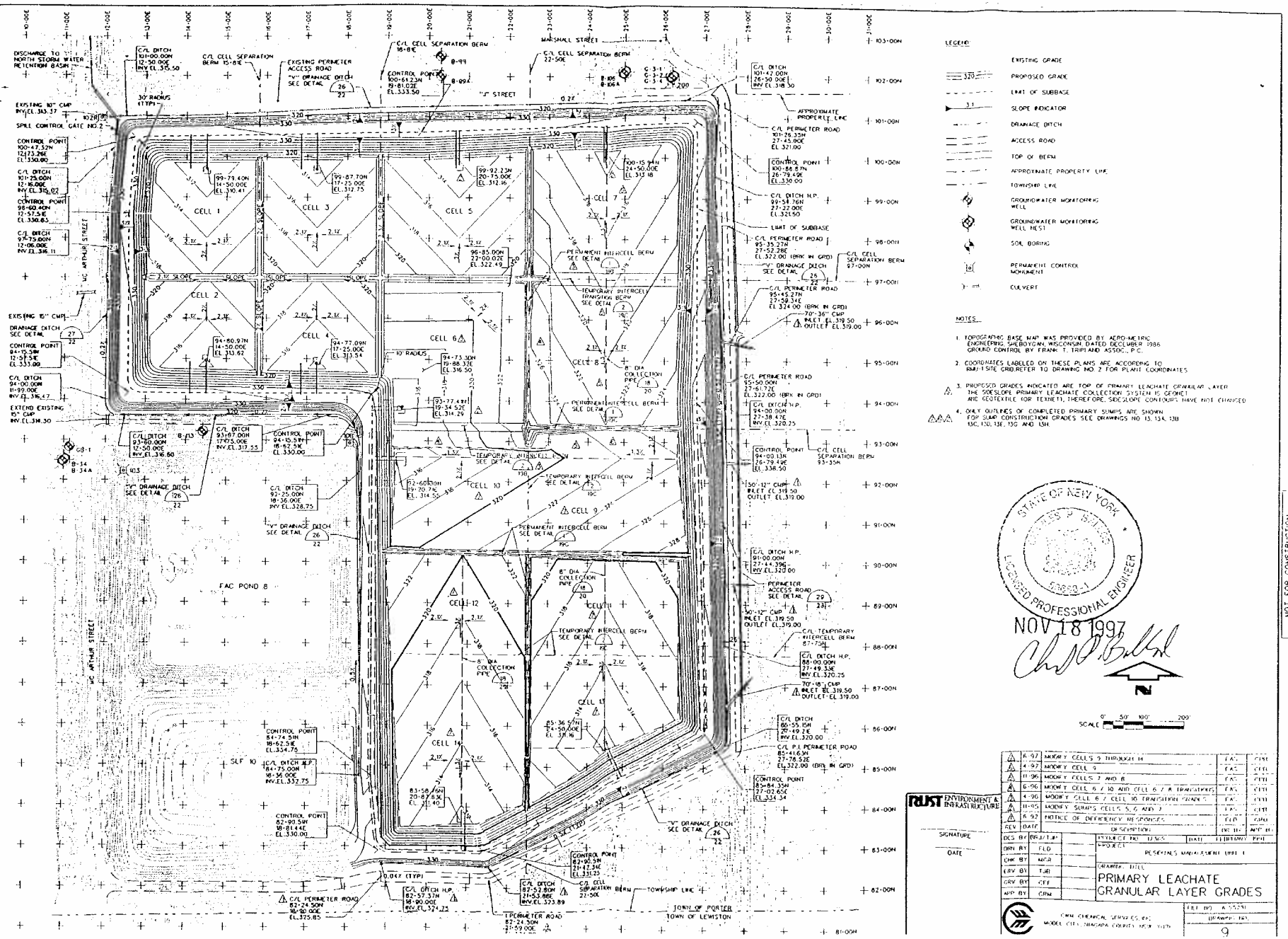
OWN CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

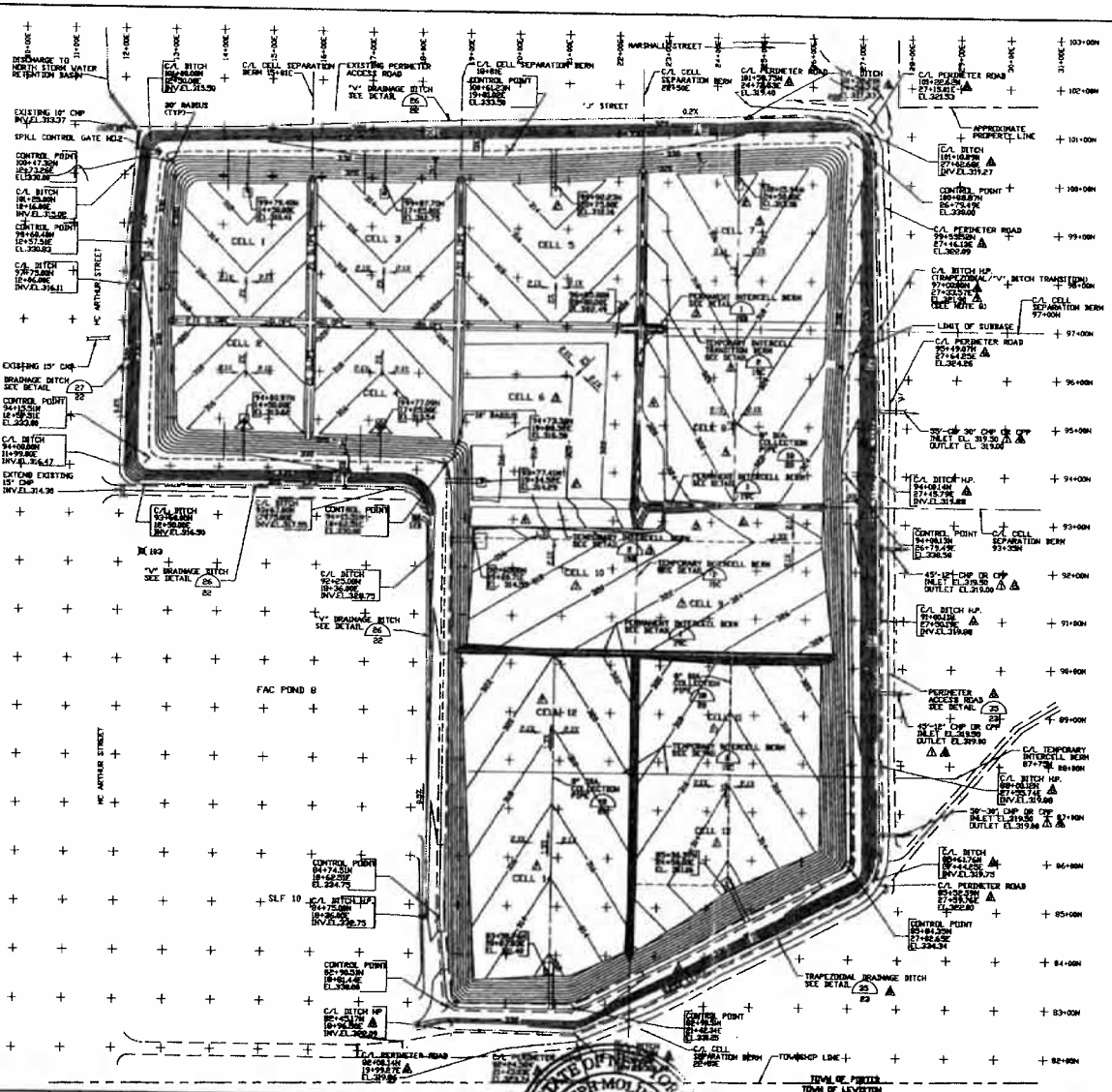
PRIMARY CLAY LINER GRADES

GENERAL Modified: 07/09

File Number	050.42
Date	JUNE 2003
	Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120

8-a


CELL 1
CELL 2
CELL 3
CELL 4
CELL 5
CELL 6
CELL 7
CELL 8
CELL 9
CELL 10
CELL 11
CELL 12
CELL 13
CELL 14
FAC POND 8
SLF 10
"U" STREET
MARSHALL STREET
MC ARTHUR STREET
TOWNSHIP LINE
TOWN OF PORTER
TOWN OF LEWISTON
LEGEND
EXISTING GRADE
PROPOSED GRADE
LIMIT OF SUBBASE
SLOPE INDICATOR
DRAINAGE DITCH
ACCESS ROAD
TOP OF BERM
APPROXIMATE PROPERTY LINE
TOWNSHIP LINE
GROUNDWATER MONITORING WELL
GROUNDWATER MONITORING WELL NEST
SOIL BORING
PERMANENT CONTROL MONUMENT
CULVERT
NOTES
1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK T. TRIPLAND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO RMI/I SITE GRID.REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF PRIMARY LEACHATE GRANULAR LAYER. THE SIDESLOPE PRIMARY LEACHATE COLLECTION SYSTEM IS GEONET AND GEOTEXTILE (OR TEXNET), THEREFORE, SIDESLOPE CONTOURS HAVE NOT CHANGED.
4. ONLY OUTLINES OF COMPLETED PRIMARY SUMPS ARE SHOWN. FOR SUMP CONSTRUCTION GRADES SEE DRAWINGS NO 13, 13A, 13B, 13C, 13D, 13E, 13G AND 13H.
STATE OF NEW YORK
LICENSED PROFESSIONAL ENGINEER
070690-1
NOV 18 1997
SCALE 0' 50' 100' 200'
NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY
RUST ENVIRONMENT & INFRASTRUCTURE
SIGNATURE
DATE
6-97 MODIFY CELLS 9 THROUGH 14 FAC CHK
4-97 MODIFY CELL 9 FAC CHK
11-96 MODIFY CELLS 7 AND 8 FAC CHK
6-96 MODIFY CELL 6 / 10 AND CELL 6 / 8 TRANSITIONS FAC CHK
4-96 MODIFY CELL 6 / CELL 10 TRANSITION GRADES FAC CHK
11-95 MODIFY SUMPS CELLS 5, 6 AND 7 FAC CHK
6-92 NOTICE OF DEFICIENCY RESPONSES FLD GPM
REV DATE DESCRIPTION DR. BY APP. BY
DES BY RMJ/LMP
DRN BY FLD
CHK BY MCR
ENV BY TJR
GRV BY CFF
APP BY GPM
PROJECT NO. 12305 DATE SEPTEMBER 1992
PROJECT: PEMBERTON LANDFILL UNIT 1
DRAWING TITLE: PRIMARY LEACHATE GRANULAR LAYER GRADES
OWN CHEMICAL SERVICES, INC.
MODEL CITY, NIAGARA COUNTY, NEW YORK
REF. NO. 6.5229
DRAWING NO. 9



LEGEND:

- EXISTING GRADE
- PROPOSED GRADE
- LIMIT OF SUBBASE
- SLOPE INDICATOR
- DRAINAGE DITCH
- ACCESS ROAD
- TOP OF BERM
- APPROXIMATE PROPERTY LINE
- TOWNSHIP LINE
- PERMANENT CONTROL MONUMENT
- CULVERT

NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1988. GROUND CONTROL BY FRANK T. TRIPP AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO NAD-1 SHE GRID. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF PRIMARY LEACHATE GRANULAR LAYER. THE SIDESLOPE PRIMARY LEACHATE COLLECTION SYSTEM IS GCOMET AND GEOTEXTILE (OR TEXNET), THEREFORE, SIDESLOPE CONTOURS HAVE NOT CHANGED.
4. ONLY OUTLINES OF COMPLETED PRIMARY SUMPS ARE SHOWN. FOR SUMP CONSTRUCTION GRADES SEE DRAWINGS NO. 13, 13A, 13B 13C, 13D, 13E, 13G AND 13H.
5. THIS DRAWING IS BASED ON A DRAWING ENTITLED "PRIMARY LEACHATE GRANULAR LAYER GRADES", PREPARED BY EARTH TECH (FILE NO. A-55291 DATED FEBRUARY 1991).
6. PRIOR REVISIONS BY EARTH TECH INCLUDE THE FOLLOWING:
   1. NOTICE OF DEFICIENCY RESPONSES (DATED 6/92, DRAWN BY FLD, APPROVED BY GRM).
   2. MODIFY SUMPS CELLS 5, 6 AND 7 (DATED 11/95, DRAWN BY FAS, APPROVED BY CPB).
   3. MODIFY CELL 6/CELL 10 TRANSITION GRADES (DATED 4/96, DRAWN BY FAS, APPROVED BY CPB).
   4. MODIFY CELL 8/10 AND CELL 6/8 TRANSITIONS. (DATED 6/96, DRAWN BY FAS, APPROVED BY CPB.)
   5. MODIFY CELL 7 AND 9 (DATED 11/96, DRAWN BY FAS, APPROVED BY CPB).
   6. MODIFY CELL 9 (DATED 4/97, DRAWN BY FAS, APPROVED BY CPB).
   7. MODIFY CELLS 9 THROUGH 14 (DATED 6/97, DRAWN BY FAS, APPROVED BY CPB).
7. BBL SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.
8. USE GENERAL FILL MATERIAL TO CREATE MOUND IN PERIMETER CHANNEL AT HIGH POINT LOCATION. TOP ELEVATION OF MOUND WILL BE 321.90. DITCH INVERT ELEVATION IMMEDIATELY UPSTREAM AND IMMEDIATELY DOWNSTREAM OF MOUND WILL BE 319.90.

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER. WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

N: 05004X02.DWG, 05042X03.DWG
E: ON=1 OFF=PREV
P: PAGESET/PLT-COL-96
12/18/02 SYR-85-MS3 ROC-85-SLM
05042005/05043007.DWG

Graphic Scale
120' 0 120' 240'

No.	Date	Revisions	Init
1	12/02	MOV. TO PERIMETER DITCH HIGH POINT	
2	6/03	MOV. TO PERIMETER DITCH, ACCESS ROAD, AND CULVERTS SEE NOTE 6 FOR PRIOR REVISIONS	

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INCONSISTENCIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

Project Mgr. TJF
Designed by BMS/CAA
Drawn by SLM
Checked by JHH
Prof. Eng. JOSEPH MOLINA
PE License No. 072644

JOSEPH P. MOLINA — 072644 — PROFESSIONAL ENGINEER — STATE OF NEW YORK

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

CWM CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

PRIMARY LEACHATE GRANULAR LAYER GRADES

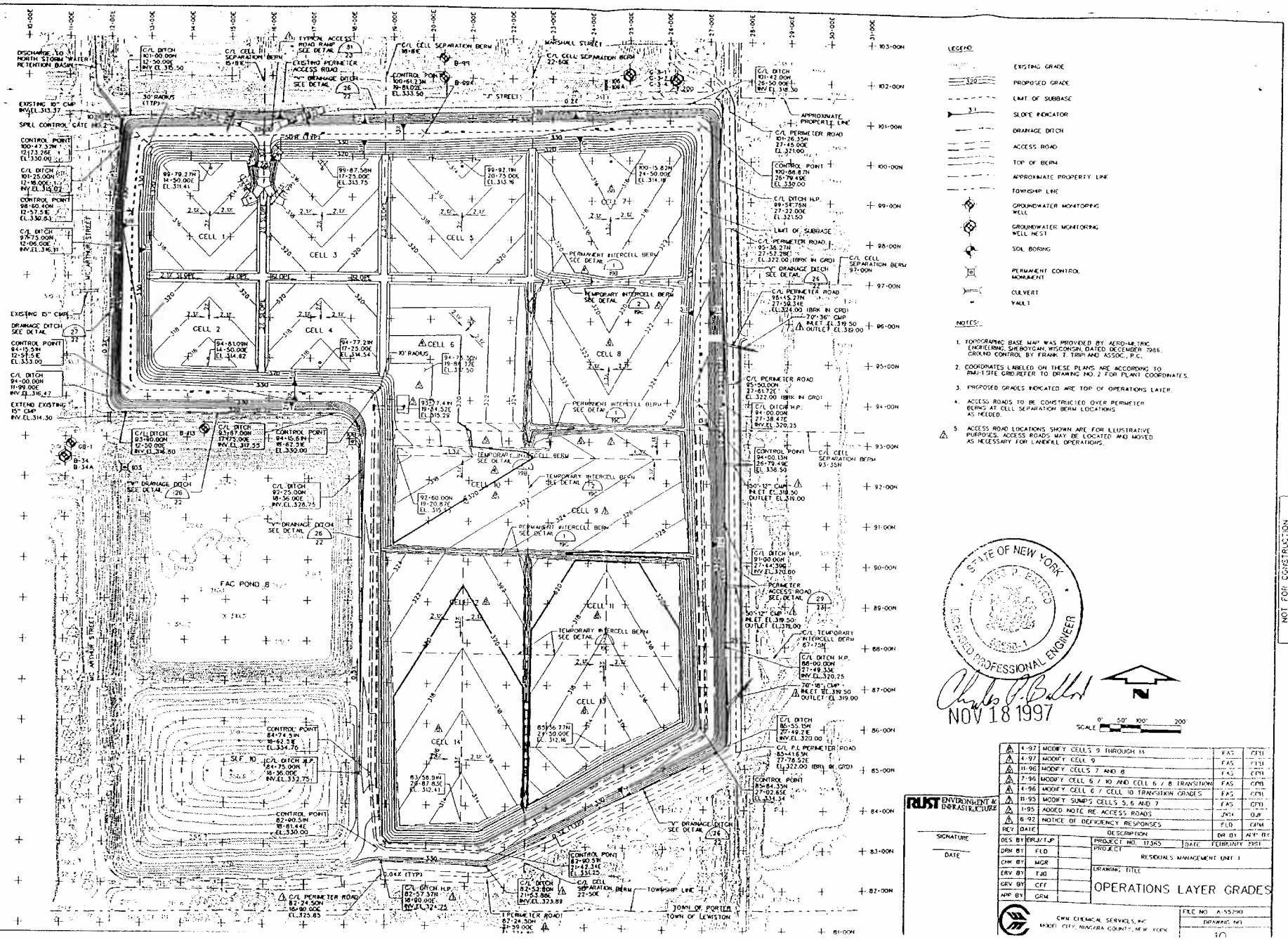
Modified: 07/09

GENERAL

File Number 050.42
Date JUNE 2003

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

9-a



STATE OF NEW YORK
CHARLES P. BALLARD
LICENSED PROFESSIONAL ENGINEER
NOV 18 1997

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

REV	DATE	DESCRIPTION	BY	APP BY
4	4-97	MODIFY CELLS 9 THROUGH 14	FAS	CPB
3	4-97	MODIFY CELL 9	FAS	CPB
2	11-96	MODIFY CELLS 7 AND 8	FAS	CPB
1	7-96	MODIFY CELLS 6 / 10 AND CELL 6 / 8 TRANSITION	FAS	CPB
4	4-96	MODIFY CELL 6 / CELL 10 TRANSITION GRADES	FAS	CPB
3	11-95	MODIFY SUMPS CELLS 5, 6 AND 7	FAS	GPD
2	1-95	ADDED NOTE RE. ACCESS ROADS	JKH	GJP
1	6-92	NOTICE OF DEFICIENCY RESPONSES	FLD	GPM

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE

DATE

DES BY	DRJ/TJP
DRN BY	FLD
CHK BY	MGR
ENV BY	TJG
GRV BY	CFF
APP BY	GPM

PROJECT NO. 17365 DATE FEBRUARY 1991

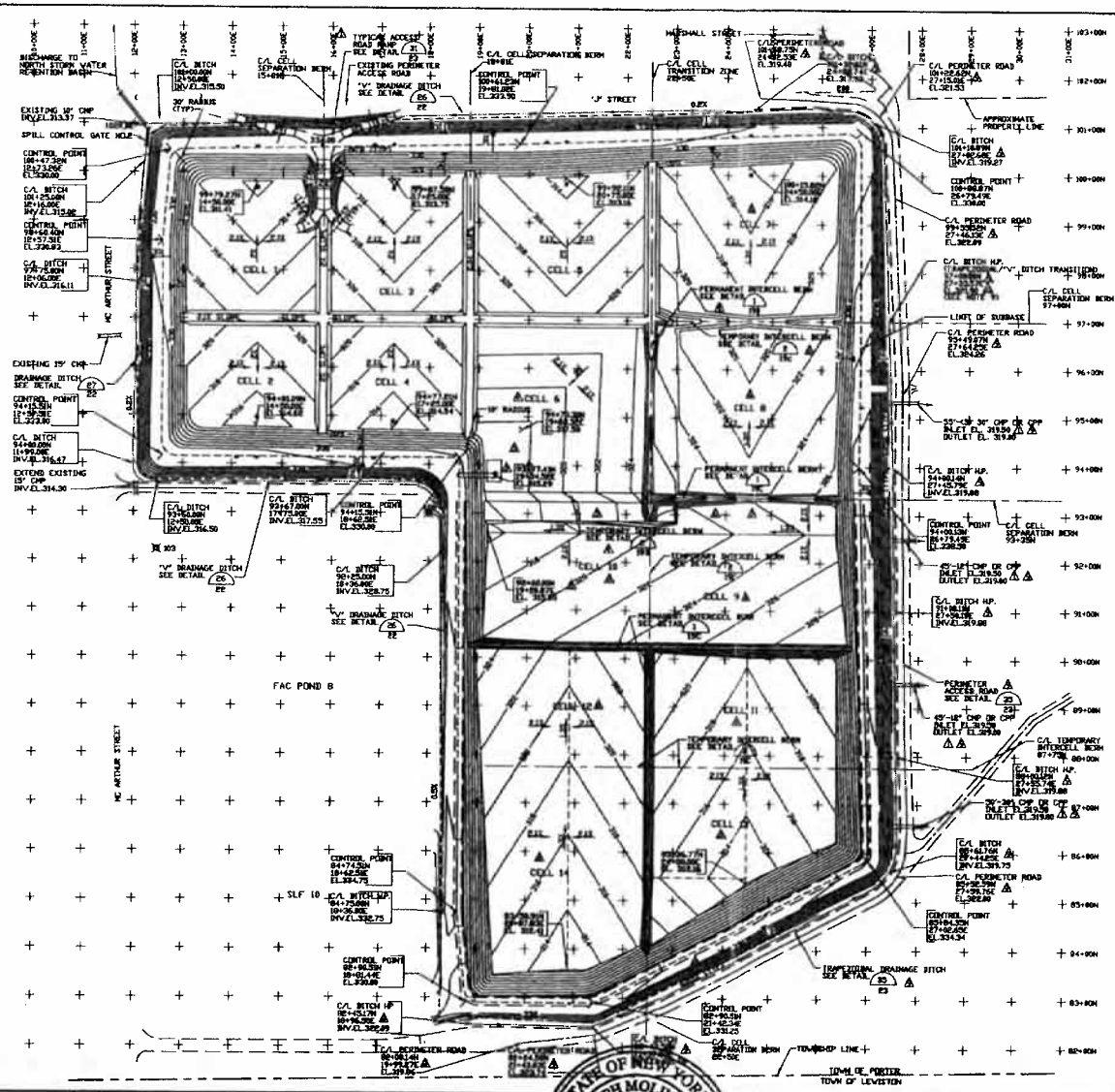
PROJECT: RESIDUALS MANAGEMENT UNIT 1

DRAWING TITLE: OPERATIONS LAYER GRADES

OWN CHEMICAL SERVICES, INC
MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. A-55290

DRAWING NO. 10



LEGEND:

- EXISTING GRADE
- PROPOSED GRADE
- LIMIT OF SUBBASE
- SLOPE INDICATOR
- DRAINAGE DITCH
- ACCESS ROAD
- TOP OF BERM
- APPROXIMATE PROPERTY LINE
- TOWNSHIP LINE
- PERMANENT CONTROL MONUMENT
- CULVERT
- VAULT

NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK T. TRAPP AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO NAD-1 SITE GRID. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF OPERATIONS LAYER.
4. ACCESS ROADS TO BE CONSTRUCTED OVER PERIMETER BERMS AT CELL SEPARATION BERM LOCATIONS AS NEEDED.
5. ACCESS ROAD LOCATIONS SHOWN ARE FOR ILLUSTRATIVE PURPOSES. ACCESS ROADS MAY BE LOCATED AND MOVED AS NECESSARY FOR LANDFILL OPERATIONS.
6. THIS DRAWING IS BASED ON A DRAWING ENTITLED "OPERATIONS LAYER GRADES", PREPARED BY EARTH TECH (FILE NO. A-58290 DATED FEBRUARY 1995).
7. PRIOR REVISIONS BY EARTH TECH INCLUDE THE FOLLOWING:
   1. NOTICE OF DEFICIENCY RESPONSES (DATED 8/92, DRAWN BY FLD, APPROVED BY ORM).
   2. ADDED NOTE RE: ACCESS ROADS (DATED 1/93, DRAWN BY JWH, APPROVED BY DJK).
   3. MODIFY BUMPS CELLS 5, 6 AND 7 (DATED 11/95, DRAWN BY FAS, APPROVED BY CPB).
   4. MODIFY CELL 8/CELL 10 TRANSITION GRADES (DATED 4/96, DRAWN BY FAS, APPROVED BY CPB).
   5. MODIFY CELL 8/10 AND CELL 8/9 TRANSITIONS. (DATED 6/96, DRAWN BY FAS, APPROVED BY CPB).
   6. MODIFY CELL 7 AND 8 (DATED 11/96, DRAWN BY FAS, APPROVED BY CPB).
   7. MODIFY CELL 9 (DATED 4/97, DRAWN BY FAS, APPROVED BY CPB).
   8. MODIFY CELLS 9 THROUGH 14 (DATED 6/97, DRAWN BY FAS, APPROVED BY CPB).
8. BBL SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.
9. USE GENERAL FILL MATERIAL TO CREATE MOUND IN PERIMETER CHANNEL AT HIGH POINT LOCATION. TOP ELEVATION OF MOUND WILL BE 321.90. DITCH INVERT ELEVATION IMMEDIATELY UPSTREAM AND IMMEDIATELY DOWNSTREAM OF MOUND WILL BE 318.90.

NOT FOR CONSTRUCTION FOR REGULATORY REVIEW ONLY

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER. WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

K: 0600-4\00E.DWG, 0604203.DWG
L: ON=* OFF=*REF*
P: PAGESET/PLT-COL-38
12/18/03 SYR-BS-MER ROC-BS-SLM
0604200S/0604203S.DWG

Graphic Scale

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions
1	12/03	REV. TO PERIMETER DITCH HIGH POINT
0	8/03	REV. TO PERIMETER DITCH, ACCESS ROAD, AND CULVERTS SEE NOTE 7 FOR PRIOR REVISIONS

Project Mgr. TF
Designed by JWH/CAA
Drawn by SLM
Checked by DJB
Prof. Eng. JOSEPH MOLINA
PE License NY 072644

STATE OF NEW YORK JOSEPH MOLINA 072644 LICENSED PROFESSIONAL ENGINEER

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

CWM CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

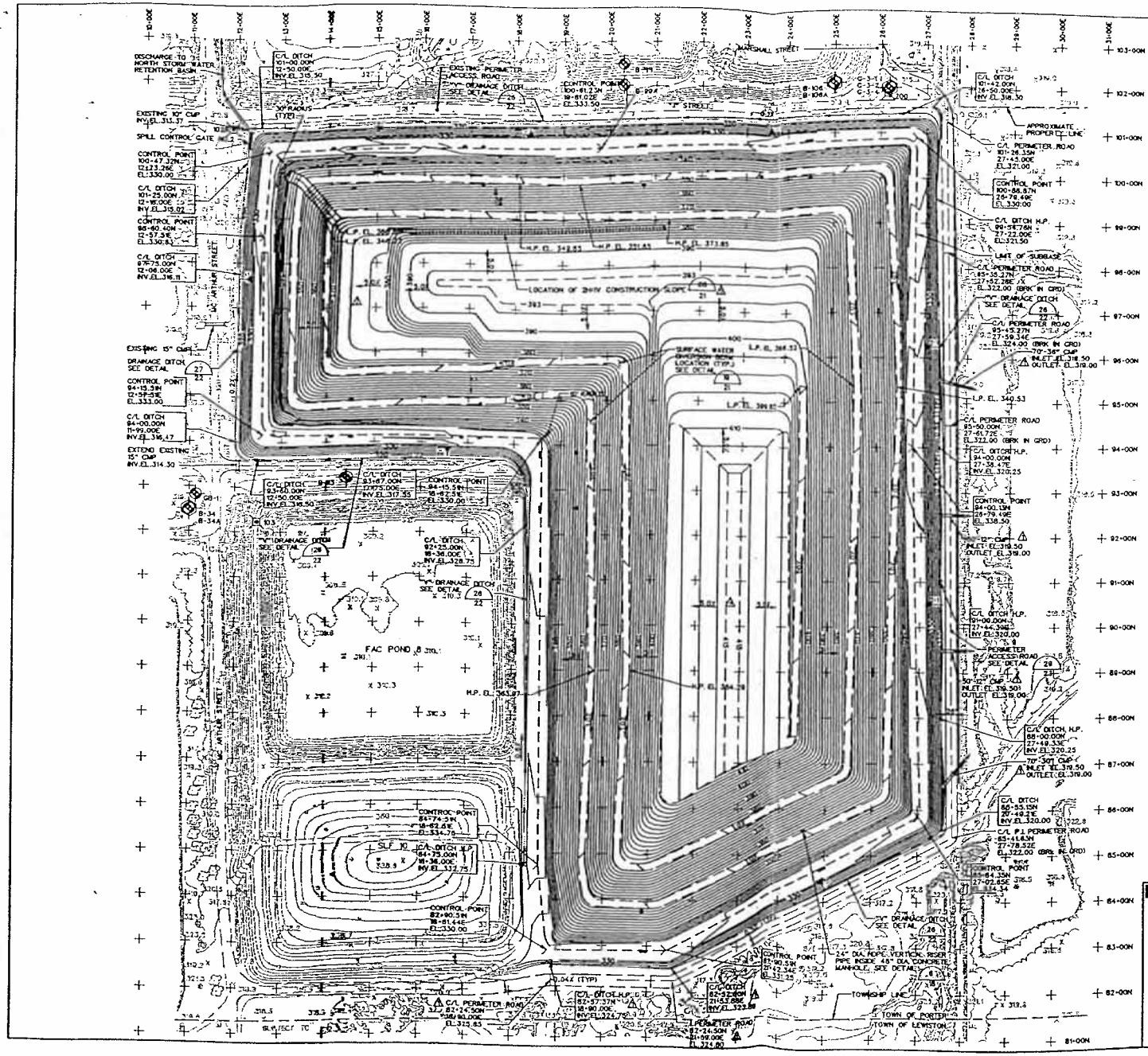
OPERATIONS LAYER GRADES

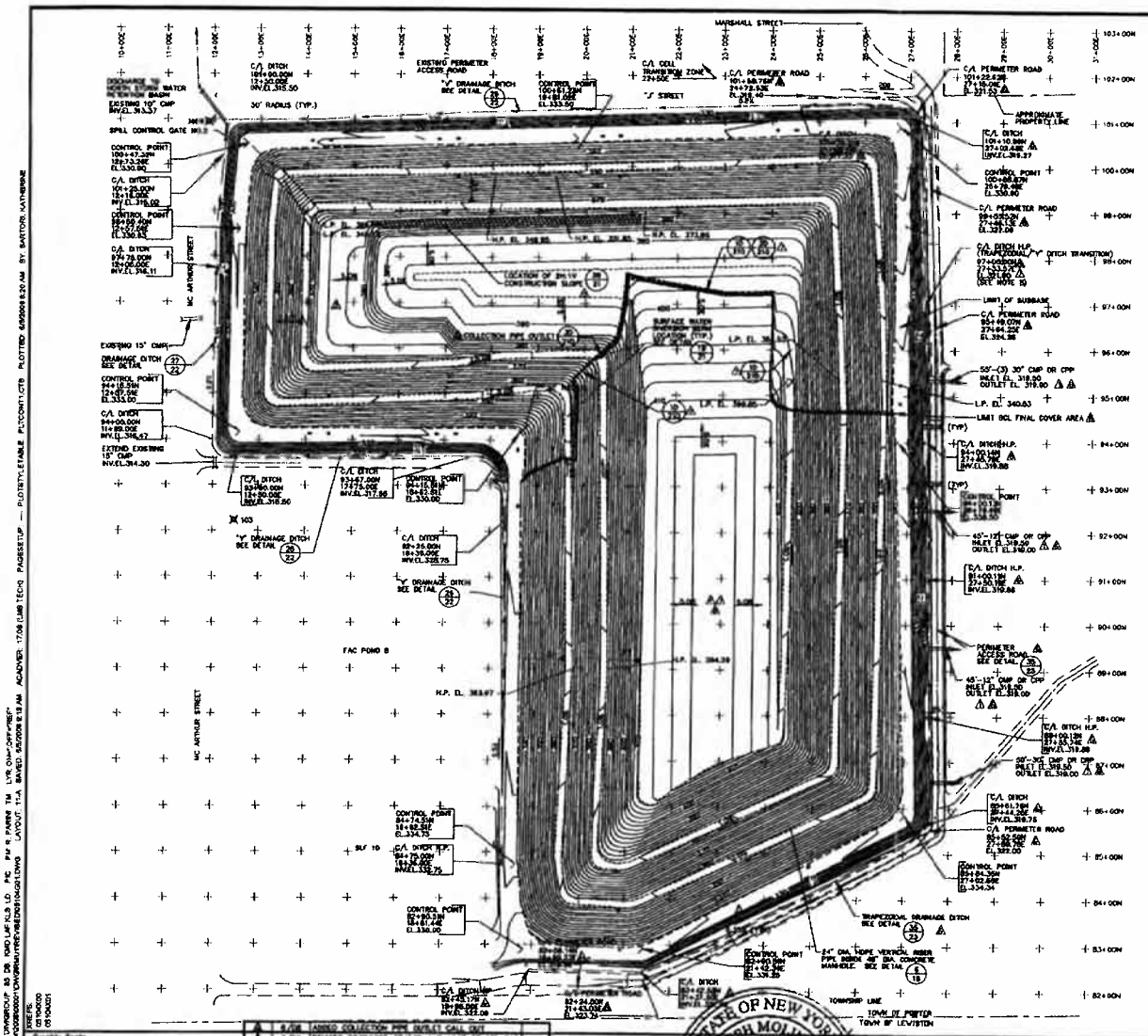
GENERAL Modified: 07/09

File Number 050.42
Date JUNE 2003

Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

10-a


LEGEND
EXISTING GRADE
PROPOSED GRADE
LIMIT OF SUBBASE
SLOPE INDICATOR
DRAINAGE DITCH
ACCESS ROAD
TOP OF BERM
APPROXIMATE PROPERTY LINE
TOWNSHIP LINE
GROUNDWATER MONITORING WELL
GROUNDWATER MONITORING WELL NEST
SOIL BORING
PERMANENT CONTROL MONUMENT
CULVERT
VAULT
24" VERTICAL RISER
NOTES:
1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK T. TRIPI AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO RMU-1 SITE GRID.REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF WASTE PRIOR TO DAILY OR INTERMEDIATE COVER PLACEMENT.
4. SURFACE WATER DIVERSION BERM TO BE CONSTRUCTED AT A MINIMUM 0.5% SLOPE.
STATE OF NEW YORK
CHARLES P. BALLOU
LICENSED PROFESSIONAL ENGINEER
AUG 2 9 2001
RECEIVED
REGION 9 PERMITS
AUG 3 1 2001
NYS DEPT. OF ENVIRONMENTAL CONSERVATION
SCALE 0' 50' 100' 200'
RUST ENVIRONMENT & INFRASTRUCTURE
SIGNATURE
DATE
REV DATE DESCRIPTION DR BY APP BY
1 6-01 ADDED LOCATION OF 3HIV CONSTRUCTION SLOPE FAS CPB
2 2-99 REVISED MANHOLE ELEVATION FAS CPB
3 5-96 REVISED TOP OF WASTE GRADES FOR ARSPACE ENHANCEMENT FAS CPB
4 6-97 SHOW REVISED GRADES FAS CPB
5 6-92 MODIFIED TOP OF WASTE GRADES INSTEAD OF DEFICIENCY RESPONSES FLD CRM
DES BY BRJ/TJP
DRN BY FLD
CHK BY MGR
ERV BY TJB
QRV BY CFF
APP BY CRM
PROJECT NO. 17365 DATE FEBRUARY 1991
PROJECT RESIDUALS MANAGEMENT UNIT 1
DRAWING TITLE TOP OF WASTE GRADES
OWN CHEMICAL SERVICES, INC. MODEL CITY, NIAGARA COUNTY, NEW YORK
FILE NO. A-55269
DRAWING NO. 11



NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1998. GROUND CONTROL BY FRANK T. WEIR AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO NAD-1 STATE GRID. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF WASTE PRIOR TO DAILY OR INTERMEDIATE COVER PLACEMENT.
4. SURFACE WATER DIVERSION BERM TO BE CONSTRUCTED AT A MINIMUM 0.5 % SLOPE.
5. THIS DRAWING IS BASED ON DRAWING NUMBER 11 ENTITLED "TOP OF WASTE GRADES", PREPARED BY EARTH TECH (FILE NO. A-54388 DATED FEBRUARY 1998).
6. PRIOR REVISIONS TO DRAWING NUMBER 11 BY EARTHTECH INCLUDE THE FOLLOWING:
   1. NOTICE OF DEFICIENCY RESPONSES, MODIFIED TOP OF WASTE GRADES (DATED 6/92, DRAWN BY FLD, APPROVED BY GRM).
   2. SHOW REVISED GRADES (DATED 6/97, DRAWN BY FAS, APPROVED BY CPB).
   3. REVISED TOP OF WASTE GRADES FOR AIRSPACE ENHANCEMENT (DATED 5/98, DRAWN BY FAS, APPROVED BY CPB).
   4. REVISED MAXIMUM ELEVATION (DATED 4/99, DRAWN BY FAS, APPROVED BY CPB).
   5. ADDED LOCATION OF 2H:1V CONSTRUCTION SLOPE (DATED 5/01, DRAWN BY FAS, APPROVED BY CPB).
7. BBL SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.
8. USE GENERAL FILL MATERIAL TO CREATE MOUND IN PERIMETER CHANNEL AT HIGH POINT LOCATION. TOP ELEVATION OF MOUND WILL BE 327.68. DITCH INVERT ELEVATION IMMEDIATELY UPSTREAM AND IMMEDIATELY DOWNSTREAM OF MOUND WILL BE 326.86.

NOT FOR CONSTRUCTION FOR REGULATORY REVIEW ONLY

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER. WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

No.	Date	Revisions	Init.
4	6/08	ADDED COLLECTION PIPE OUTLET CALL OUT	
3	3/08	REVISED PROPOSED GRADES AND LIMIT OF GCL CAP	
2	12/03	REVISED PROPOSED GRADES FOR AIRSPACE ENHANCEMENT AND PERIMETER DITCH HIGH POINT	
1	6/03	REV. TO PERIMETER DITCH, ACCESS ROAD, AND CULVERTS	
0		SEE NOTE 6 FOR PRIOR REVISIONS	

Graphic Scale 150' 0 150' 300'

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY METHOD. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

Project Mgr. TJF
Designed by BMS/CAA
Drawn by SLM
Checked by TJF
Prof. Eng. JOSEPH MOLINA
PE License NY 072644

STATE OF NEW YORK JOSEPH MOLINA 072644 PROFESSIONAL ENGINEER

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

CWM CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

TOP OF WASTE GRADES

GENERAL

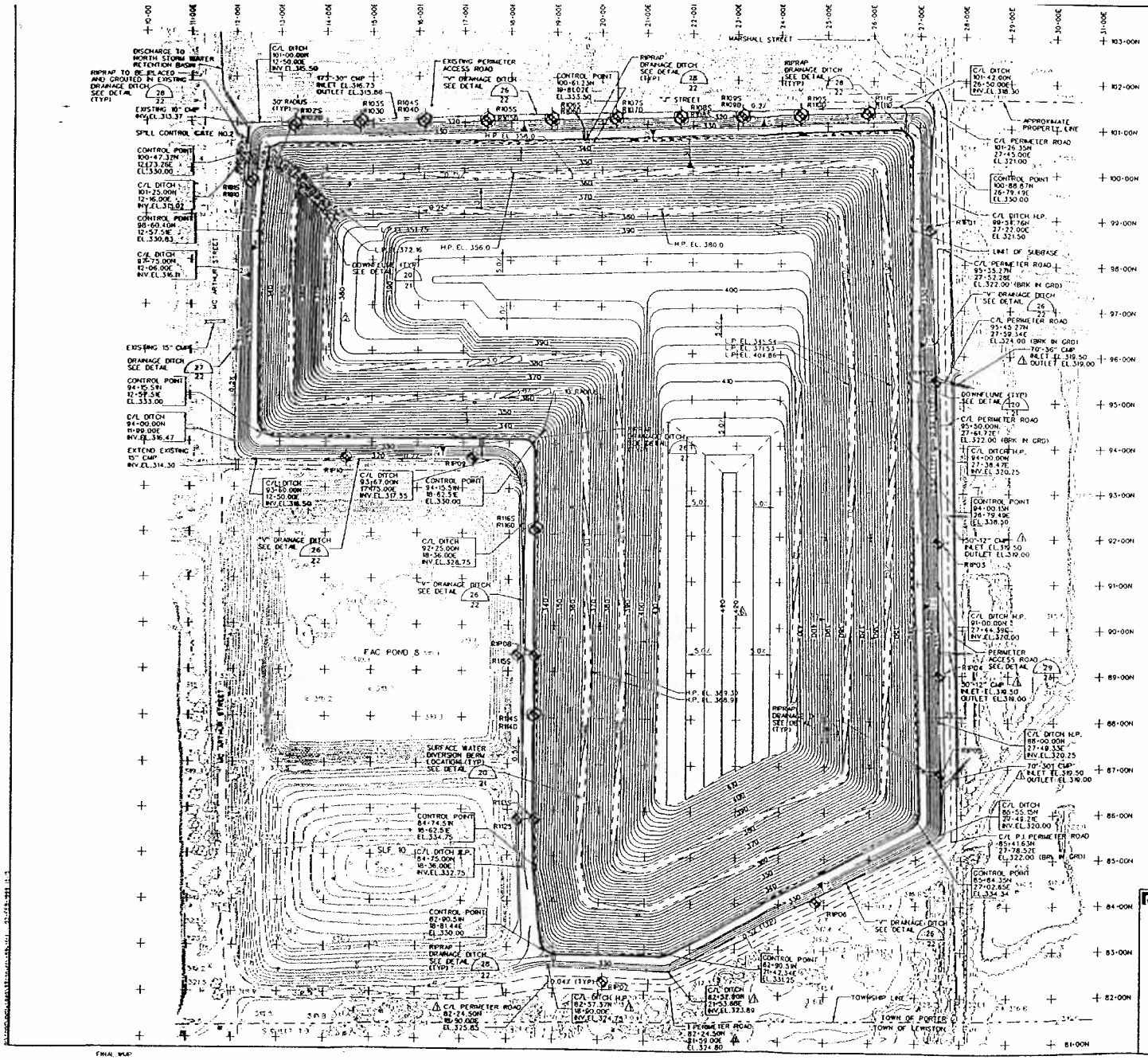
Modified: 07/09

File Number 000.43
Date DECEMBER 2003
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120

11-a

CITY: SYRACUSE1 DIV/GROUP: 83 DB: TOM LAY: XLB LD: PIC PM: R. PARRY TM: LYR: ON=*;OFF=*REF* G:\CAD\CTM00518\000000\DWG\RMU1\TREV\RMU1TOP0104GB1.DWG LAYOUT: T1-A SAVED: 6/5/2008 8:19 AM ACADVER: 17.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTCONT1.CTB PLOTTED: 6/5/2008 8:20 AM BY: BARTON, KATHERINE

DRAWING NUMBER: 11 OF 11 05100431



LEGEND:

NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1986. GROUND CONTROL BY FRANK T. TRIPLAND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO RMI-1 SITE GRID. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF VEGETATIVE COVER SOIL.
4. DRAINAGE TILE TO BE PLACED UNDER SURFACE WATER DRAINAGE DITCH. SEE DETAIL 17.
5. WELLS SHOWN ON THIS DRAWING ARE THE EXISTING MONITORING WELLS FOR RMI-L

STATE OF NEW YORK
CHARLES P. BALLOD
LICENSED PROFESSIONAL ENGINEER
53288-1
FEB 04 1999

N

SCALE 0' 50' 100' 200'

REV	DATE	DESCRIPTION	BY	APP BY
2	2-99	REVISED MAXIMUM ELEVATION	FAS	CPB
1	11-98	REMOVED FINAL COVER ACCESS ROAD	FAS	CPB
5	5-98	REVISED FINAL GRADES FOR ARMPACE ENHANCEMENT	FAS	CPB
4	4-98	REVISED DIVERSION BERMS PHASE I-E AND WCHP AREAS	FAS	CPB
3	6-97	SHOW LIMIT OF PHASE I AND FINAL CAPPING AND REVISED GRADES	FAS	CPB
A	6-92	NOTICE OF DEFICIENCY RESPONSES	FLD	GRM

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE

DATE

DES BY	BRJ/TJP
DRN BY	FLD
CHK BY	MGR
ENV BY	TJB
CRV BY	CFF
APP BY	GRM

PROJECT NO. 17565 DATE FEBRUARY 1991

PROJECT
RESIDUALS MANAGEMENT UNIT 1

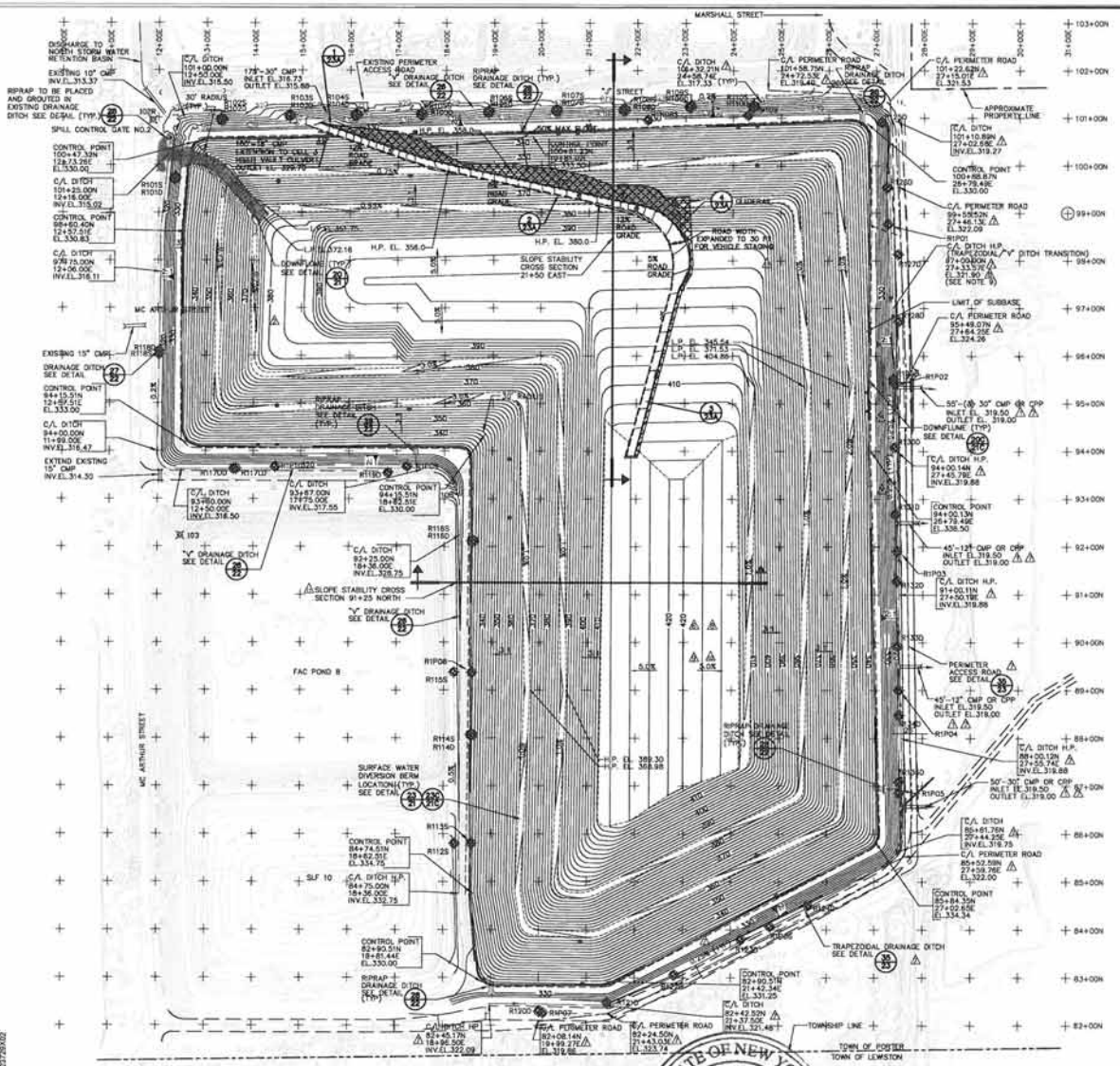
DRAWING TITLE
TOP OF VEGETATIVE COVER GRADES

CWM CHEMICAL SERVICES, INC.
MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. A-55268

DRAWING NO.
12

FINAL MAP



LEGEND:

- EXISTING GRADE
- PROPOSED GRADE
- LIMIT OF SUBBASE
- SLOPE INDICATOR
- DRAINAGE DITCH
- ACCESS ROAD
- TOP OF BERM
- APPROXIMATE PROPERTY LINE
- TOWNSHIP LINE
- GROUNDWATER MONITORING WELL
- GROUNDWATER MONITORING WELL NEST
- SOIL BORING
- PERMANENT CONTROL MONUMENT
- CULVERT
- VAULT
- PERMANENT EROSION CONTROL MAT

NOT FOR CONSTRUCTION
FOR REGULATORY REVIEW ONLY

NOTES:

1. TOPOGRAPHIC BASE MAP WAS PROVIDED BY AERO-METRIC ENGINEERING, SHEBOYGAN, WISCONSIN, DATED DECEMBER 1996. GROUND CONTROL BY FRANK T. TRIPI AND ASSOC., P.C.
2. COORDINATES LABELED ON THESE PLANS ARE ACCORDING TO RMU-1 SITE GRID. REFER TO DRAWING NO. 2 FOR PLANT COORDINATES.
3. PROPOSED GRADES INDICATED ARE TOP OF VEGETATIVE COVER SOIL.
4. DRAINAGE TILE TO BE PLACED UNDER SURFACE WATER DRAINAGE DITCH. SEE DETAIL 17.
5. WELLS SHOWN ON THIS DRAWING ARE THE EXISTING MONITORING WELLS FOR RMU-1.
6. THIS DRAWING BASED ON DRAWING NUMBER 12 ENTITLED "TOP OF VEGETATIVE COVER GRADES", PREPARED BY EARTH TECH (FILE NO. A-5528B DATED FEBRUARY 1991).
7. PRIOR REVISIONS TO DRAWING NUMBER 12 BY EARTHTECH INCLUDE THE FOLLOWING:
   1. NOTICE OF DEFICIENCY RESPONSES (DATED 6/92, DRAWN BY FLO, APPROVED BY GRM).
   2. SHOW LIMIT OF PHASE I AND II FINAL CAPPING AND REVISED GRADES.(DATED 6/97, DRAWN BY FAS, APPROVED BY CPB).
   3. REVISED DIVERSION BERMS PHASE II/AND III CAP AREAS (DATED 4/98, DRAWN BY FAS, APPROVED BY CPB).
   4. REVISED FINAL GRADES FOR AIR SPACE ENHANCEMENT (DATED 5/98, DRAWN BY FAS, APPROVED BY CPB).
   5. REMOVED FINAL COVER ACCESS ROAD (DATED 11/98, DRAWN BY FAS, APPROVED BY CPB).
   6. REVISED MAXIMUM ELEVATIONS (DATED 2/99, DRAWN BY FAS, APPROVED BY CPB).
   7. REVISION TO PERIMETER DITCH, ACCESS ROAD, AND CULVERTS
8. BBL SEAL AND SIGNATURE PERTAIN ONLY TO BBL IMPLEMENTED REVISIONS AS NOTED IN THE REVISION BLOCK.
9. USE GENERAL FILL MATERIAL TO CREATE MOUND IN PERIMETER CHANNEL AT HIGH POINT LOCATION. TOP ELEVATION OF MOUND WILL BE 321.90. DITCH INVERT ELEVATION IMMEDIATELY UPSTREAM AND IMMEDIATELY DOWNSTREAM OF MOUND WILL BE 319.90.

DRAWING REVISED BY BLASLAND, BOUCK & LEE, INC. THROUGH ITS PROFESSIONAL ENGINEER. WORK OF EARTHTECH NOT INDEPENDENTLY REVIEWED.

XREFS:
05104X01
05104X03
22120502

CITY: SYRACUSE DIVGROUP: 85 DB: KMOLLA LAF LD: INC: PM: R_PARK TM: LYR ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIVE\22120502\DWG\PERMIT\22729013A.DWG LAYOUT: 12-A SAVED: 8/6/2012 2:54 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTCONT1.CTB PLOTTED: 8/10/2012 3:55 PM BY: SARTORI, KATHERINE

Graphic Scale
120' 0 120' 240'

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init.
4	8/12	ADDED PROPOSED PLATEAU ACCESS ROAD GRADING	
3	6/08	REVISED SLOPE STABILITY CROSS SECTIONS	
2	3/08	REVISED PROPOSED GRADING	
1	9/07	ADDED SLOPE STABILITY CROSS SECTIONS	
0	12/03	REVISED PROPOSED GRADES FOR AIRSPACE ENHANCEMENT AND PERIMETER DITCH HIGH POINT. SEE NOTE 7 FOR PRIOR REVISIONS	

Project Mgr. TJF
Designed by BMS/CAA
Drawn by SLM
Checked by PHB
Prof. Eng. JOSEPH MOLINA
PE License NY 072644

STATE OF NEW YORK * JOSEPH MOLINA III * 072644 * PROFESSIONAL ENGINEER

BBL BLASLAND, BOUCK & LEE, INC. engineers & scientists

CWM CHEMICAL SERVICES, LLC. • MODEL CITY FACILITY
RESIDUALS MANAGEMENT UNIT 1

TOP OF VEGETATIVE COVER GRADES

GENERAL

File Number 050.42.005
Date DECEMBER 2003
Blasland, Bouck & Lee, Inc. Corporate Headquarters 6723 Towpath Road Syracuse, NY 13214 315-446-9120

12-a

CELL 1 SUMP GRADES

	COORDINATES NORTH	COORDINATES EAST	ELEVATION
SECONDARY SUMP UNDERCUT GRADES			
AA	99+83.00	13+96.75	TOE 3:1
BB	99+48.00	13+96.75	GRADE
CC	99+33.54	14+61.00	TOE 3:1
DD	99+48.04	14+61.00	GRADE
EE	99+78.75	14+06.00	300.97
FF	99+53.00	14+06.00	300.97
GG	99+87.54	14+58.00	302.01
HH	99+57.54	14+58.00	302.01
SECONDARY SUMP GRADES			
A	99+83.00	13+98.00	TOE 3:1
B	99+48.00	13+98.00	GRADE
C	99+87.54	14+46.00	TOE 3:1
D	99+82.54	14+46.00	GRADE
E	99+87.54	14+59.50	TOE 3:1
F	99+48.04	15+59.50	GRADE
G	99+60.75	14+08.00	304.05
H	99+56.75	14+08.00	304.05
I	99+60.75	14+12.00	304.05
J	99+56.75	14+12.00	304.05
K	99+64.00	14+14.00	305.13
L	99+54.75	14+14.00	305.13
M	99+82.54	14+56.00	305.97
N	99+57.54	14+56.00	305.97
PRIMARY SUMP GRADES			
S	TOE 3:1	14+41.00	GRADE
T	99+57.54	14+41.00	GRADE
U	TOE 3:1	14+59.00	GRADE
V	99+57.54	14+59.00	GRADE
W	99+70.54	14+46.00	307.47
X	99+62.54	14+46.00	307.47
Y	99+70.54	14+54.00	307.47
Z	99+62.54	14+54.00	307.47

CELL 2 SUMP GRADES

	COORDINATES NORTH	COORDINATES EAST	ELEVATION
SECONDARY SUMP UNDERCUT GRADES			
AA	94+77.87	13+96.75	TOE 3:1
BB	95+42.87	13+96.75	GRADE
CC	94+66.83	14+61.00	TOE 3:1
DD	95+42.33	14+61.00	GRADE
EE	94+82.62	14+06.00	304.18
FF	95+28.62	14+06.00	304.18
GG	95+07.87	14+58.00	305.22
HH	95+02.83	14+58.00	305.22
SECONDARY SUMP GRADES			
A	94+77.87	13+98.00	TOE 3:1
B	95+42.87	13+98.00	GRADE
C	94+94.83	14+46.00	TOE 3:1
D	94+67.83	14+46.00	308.92
E	94+72.83	14+59.50	TOE 3:1
F	95+42.33	14+59.50	GRADE
G	95+00.12	14+08.00	307.26
H	95+04.12	14+08.00	307.26
I	95+00.12	14+12.00	307.26
J	95+04.12	14+12.00	307.26
K	94+96.87	14+14.00	308.34
L	95+06.12	14+14.00	308.34
M	94+77.83	14+56.00	309.18
N	95+02.83	14+56.00	309.18
PRIMARY SUMP GRADES			
S	TOE 3:1	14+41.00	GRADE
T	95+02.83	14+41.00	GRADE
U	TOE 3:1	14+59.00	GRADE
V	95+02.83	14+59.00	GRADE
W	94+69.83	14+46.00	310.68
X	94+97.83	14+46.00	310.68
Y	94+69.83	14+54.00	310.68
Z	94+97.83	14+54.00	310.68

CELL 3 SUMP GRADES

	COORDINATES NORTH	COORDINATES EAST	ELEVATION
SECONDARY SUMP UNDERCUT GRADES			
AA	99+91.28	16+71.75	TOE 3:1
BB	99+56.28	16+71.75	GRADE
CC	100+01.84	17+36.00	TOE 3:1
DD	99+56.34	17+36.00	GRADE
EE	99+86.53	16+81.00	303.30
FF	99+61.28	16+81.00	303.30
GG	99+95.84	17+33.00	304.34
HH	99+65.84	17+33.00	304.34
SECONDARY SUMP GRADES			
A	99+91.28	16+73.00	TOE 3:1
B	99+56.28	16+73.00	GRADE
C	99+95.84	17+21.00	TOE 3:1
D	99+90.84	17+21.00	308.043
E	99+95.84	17+34.50	TOE 3:1
F	99+56.34	17+34.50	GRADE
G	99+69.03	16+83.00	306.38
H	99+65.03	16+83.00	306.38
I	99+69.03	16+87.00	306.38
J	99+65.03	16+87.00	306.38
K	99+72.28	16+89.00	307.46
L	99+63.03	16+89.00	307.46
M	99+90.84	17+31.00	308.30
N	99+65.84	17+31.00	308.30
PRIMARY SUMP GRADES			
S	TOE 3:1	17+16.00	GRADE
T	99+65.84	17+16.00	GRADE
U	TOE 3:1	17+34.00	GRADE
V	99+65.84	17+34.00	GRADE
W	99+78.84	17+21.00	309.80
X	99+70.84	17+21.00	309.80
Y	99+78.84	17+29.00	309.80
Z	99+70.84	17+29.00	309.80

CELL 4 SUMP GRADES

	COORDINATES NORTH	COORDINATES EAST	ELEVATION
SECONDARY SUMP UNDERCUT GRADES			
AA	94+74.00	16+71.75	TOE 3:1
BB	95+09.00	16+71.75	GRADE
CC	94+62.94	17+36.00	TOE 3:1
DD	95+08.00	17+36.00	GRADE
EE	94+78.75	16+81.00	304.10
FF	95+04.00	16+81.00	304.10
GG	94+68.94	17+33.00	305.14
HH	94+98.94	17+33.00	305.14
SECONDARY SUMP GRADES			
A	94+74.00	16+73.00	TOE 3:1
B	95+09.00	16+73.00	GRADE
C	94+68.94	17+21.00	TOE 3:1
D	94+73.94	17+21.00	308.84
E	94+68.94	17+34.50	TOE 3:1
F	95+08.44	17+34.50	GRADE
G	94+96.25	16+83.00	307.18
H	95+00.25	16+83.00	307.18
I	94+96.25	16+87.00	307.18
J	95+00.25	16+87.00	307.18
K	94+91.00	16+89.00	308.26
L	95+02.25	16+89.00	308.26
M	94+90.25	17+31.00	309.10
N	95+15.25	17+31.00	309.10
PRIMARY SUMP GRADES			
S	TOE 3:1	17+16.00	GRADE
T	94+98.94	17+16.00	GRADE
U	TOE 3:1	17+34.00	GRADE
V	94+98.94	17+34.00	GRADE
W	94+85.94	17+21.00	310.60
X	94+91.94	17+21.00	310.60
Y	94+85.94	17+29.00	310.60
Z	94+91.94	17+29.00	310.60

CELL 5 ⚠ SUMP GRADES (SEE NOTE 3)

	COORDINATES NORTH	COORDINATES EAST	ELEVATION
SECONDARY SUMP UNDERCUT GRADES			
AA	99+93.69	20+21.75	TOE 3:1
BB	99+58.69	20+21.75	GRADE
CC	100+06.38	20+86.00	TOE 3:1
DD	99+60.88	20+86.00	GRADE
EE	99+88.94	20+31.00	302.71
FF	99+52.94	20+31.00	302.71
GG	100+00.38	20+83.00	303.75
HH	99+70.38	20+83.00	303.75
SECONDARY SUMP GRADES			
A	99+93.69	20+23.00	TOE 3:1
B	99+58.69	20+23.00	GRADE
C	100+00.38	20+70.00	TOE 3:1
D	99+95.38	20+70.00	307.45
E	100+00.38	20+84.50	TOE 3:1
F	99+60.88	20+84.50	GRADE
G	99+71.44	20+33.00	305.79
H	99+67.44	20+33.00	305.79
I	99+71.44	20+37.00	305.79
J	99+67.44	20+37.00	305.79
K	99+74.69	20+39.00	306.87
L	99+65.44	20+39.00	306.87
M	99+95.38	20+81.00	307.71
N	99+73.38	20+81.00	307.71
PRIMARY SUMP GRADES			
S	TOE 3:1	20+66.00	GRADE
T	99+70.38	20+66.00	GRADE
U	TOE 3:1	20+84.00	GRADE
V	99+70.38	20+84.00	GRADE
W	99+83.38	20+71.00	309.21
X	99+75.38	20+71.00	309.21
Y	99+83.38	20+79.00	309.21
Z	99+75.38	20+79.00	309.21

CELL 6 ⚠ SUMP GRADES (SEE NOTE 3)

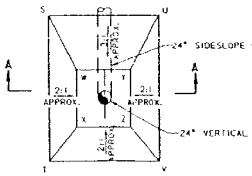
	COORDINATES NORTH	COORDINATES EAST	ELEVATION
SECONDARY SUMP UNDERCUT GRADES			
AA	93+55.42	19+16.02	TOE 3:1
BB	93+55.42	19+51.02	GRADE
CC	94+19.67	19+05.27	TOE 3:1
DD	94+19.67	19+50.77	GRADE
EE	93+64.67	19+20.77	305.13
FF	93+64.67	19+46.02	305.13
GG	94+19.67	19+11.27	306.17
HH	94+19.67	19+41.27	306.17
SECONDARY SUMP GRADES			
A	93+56.67	19+16.02	TOE 3:1
B	93+56.67	19+51.02	GRADE
C	94+04.67	19+11.27	TOE 3:1
D	94+04.67	19+46.27	307.39
E	94+19.17	19+11.27	TOE 3:1
F	94+19.17	19+50.77	GRADE
G	93+66.67	19+38.27	308.21
H	93+66.67	19+46.27	308.21
I	93+70.67	19+38.27	308.21
J	93+70.67	19+42.27	308.21
K	93+72.67	19+35.02	309.29
L	93+72.67	19+44.27	309.29
M	94+14.67	19+16.27	310.13
N	94+14.67	19+41.27	310.13
PRIMARY SUMP GRADES			
S	93+99.67	TOE 3:1	GRADE
T	93+99.67	19+41.27	GRADE
U	94+17.67	TOE 3:1	GRADE
V	94+17.67	19+41.27	GRADE
W	94+04.67	19+28.27	311.63
X	94+04.67	19+36.27	311.63
Y	94+12.67	19+28.27	311.63
Z	94+12.67	19+36.27	311.63

CELL 7 ⚠ SUMP GRADES (SEE NOTE 3)

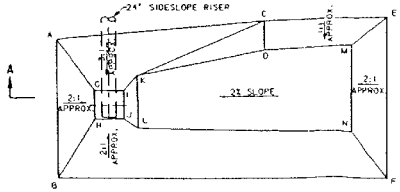
	COORDINATES NORTH	COORDINATES EAST	ELEVATION
SECONDARY SUMP UNDERCUT GRADES			
AA	100+17.25	23+96.75	TOE 3:1
BB	99+82.25	23+96.75	GRADE
CC	100+30.08	24+61.00	TOE 3:1
DD	99+84.58	24+61.00	GRADE
EE	100+12.49	24+06.00	303.74
FF	99+87.24	24+06.00	303.74
GG	100+20.08	24+58.00	304.78
HH	99+94.08	24+58.00	304.78
SECONDARY SUMP GRADES			
A	100+17.25	23+98.00	TOE 3:1
B	99+82.25	23+98.00	GRADE
C	100+24.08	24+46.00	TOE 3:1
D	100+19.08	24+46.00	308.48
E	100+24.08	24+59.50	TOE 3:1
F	99+84.58	24+59.50	GRADE
G	99+94.99	24+08.00	306.82
H	99+90.99	24+08.00	306.82
I	99+90.99	24+12.00	306.82
J	99+90.99	24+12.00	306.82
K	99+98.24	24+14.00	307.90
L	99+88.99	24+14.00	307.90
M	100+19.08	24+56.00	308.74
N	99+94.08	24+56.00	308.74
PRIMARY SUMP GRADES			
S	TOE 3:1	24+41.00	GRADE
T	99+94.08	24+41.00	GRADE
U	TOE 3:1	24+55.00	GRADE
V	99+94.08	24+59.00	GRADE
W	100+07.08	24+46.00	310.24
X	99+99.08	24+46.00	310.24
Y	100+07.08	24+54.00	310.24
Z	99+99.08	24+54.00	310.24

CELL 8 ⚠ SUMP GRADES (SEE NOTE 3)

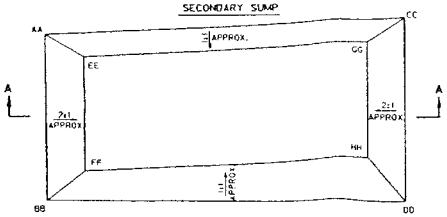
	COORDINATES NORTH	COORDINATES EAST	ELEVATION
SECONDARY SUMP UNDERCUT GRADES			
AA	94+71.75	26+04.56	TOE 3:1
BB	94+71.75	25+69.56	GRADE
CC	95+36.00	26+17.46	TOE 3:1
DD	95+36.00	25+71.96	GRADE
EE	94+81.00	25+93.81	305.49
FF	94+81.00	25+74.56	305.49
GG	95+33.00	26+11.46	306.53
HH	95+33.00	25+81.46	306.53
SECONDARY SUMP GRADES			
A	94+73.00	26+04.56	TOE 3:1
B	94+73.00	25+69.56	GRADE
C	95+21.00	26+11.46	TOE 3:1
D	95+21.00	26+06.46	310.23
E	95+34.50	26+11.46	TOE 3:1
F	95+34.50	25+71.96	GRADE
G	UCBWTWST	25+82.31	308.57
H	94+83.00	25+82.31	308.57
I	94+87.00	25+82.31	308.57
J	94+87.00	25+78.31	308.57
K	94+89.00	25+85.56	309.65
L	94+89.00	25+76.31	309.65
M	95+31.00	26+06.46	310.49
N	95+31.00	25+81.46	310.49
PRIMARY SUMP GRADES			
S	95+16.00	TOE 3:1	GRADE
T	95+16.00	25+81.46	GRADE
U	95+34.00	TOE 3:1	GRADE
V	95+34.00	25+81.46	GRADE
W	95+21.00	25+94.46	311.99
X	95+21.00	25+86.46	311.99
Y	95+29.00	25+94.46	311.99
Z	95+29.00	25+86.46	311.99



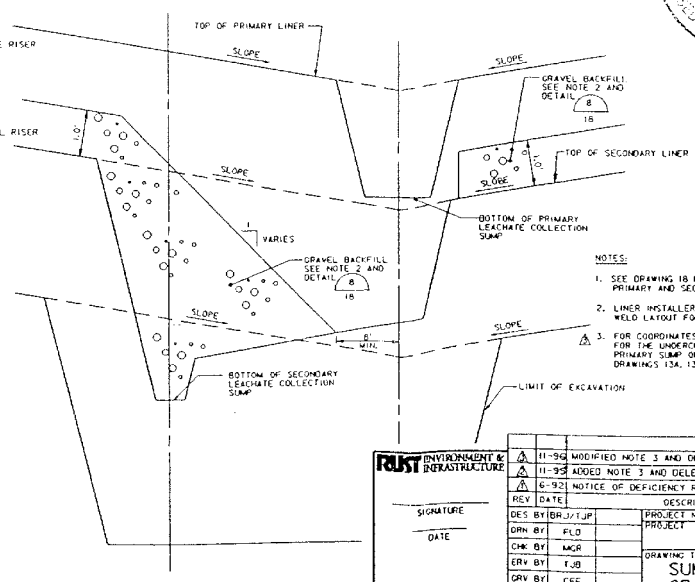
PRIMARY SUMP



SECONDARY SUMP



SECONDARY SUMP UNDERCUT



SECTION A-A

NOTES:

1. SEE DRAWING 18 FOR TYPICAL CROSS SECTIONS OF PRIMARY AND SECONDARY SUMPS.
2. LINER INSTALLER TO PROVIDE OWNER WITH PANEL AND WELD LAYOUT FOR SUMPS PRIOR TO FIELD WORK.
3. ⚠ FOR COORDINATES, ELEVATIONS AND GRADES FOR THE UNDERCUT, SECONDARY SUMP AND PRIMARY SUMP OF CELLS 5, 6, 7 AND 8 SEE DRAWINGS 13A, 13B, 13C, AND 13D.

STATE OF NEW YORK
CHARLES P. BALLOD
LICENSED PROFESSIONAL ENGINEER
FEB 06 1997

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE

DATE

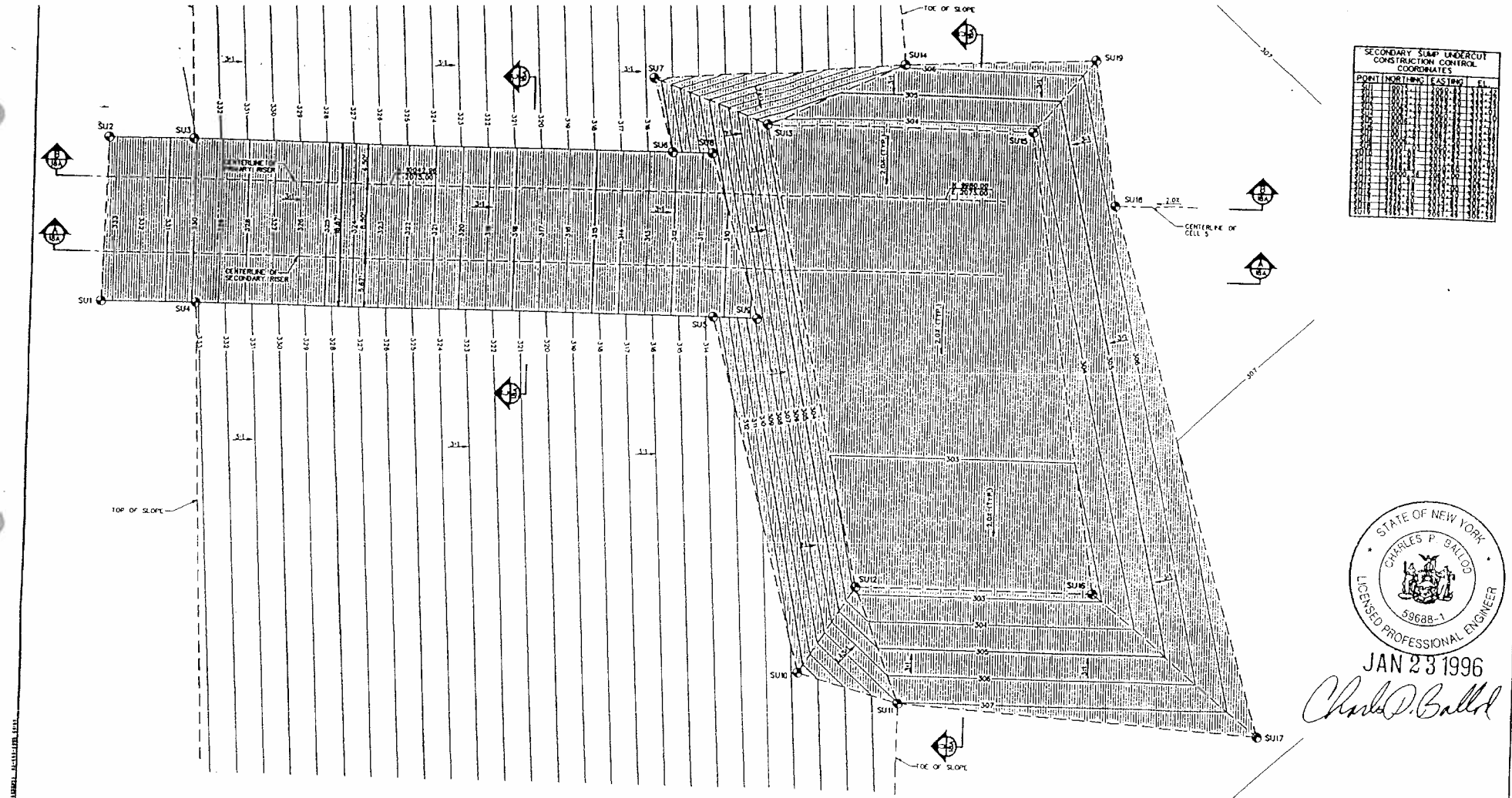
REV	DATE	DESCRIPTION	BY	APP BY
⚠	11-96	MODIFIED NOTE 3 AND DELETED TABLE	FAS	CPB
⚠	11-95	ADDED NOTE 3 AND DELETED TABLES	FAS	CPB
⚠	6-92	NOTICE OF DEFICIENCY RESPONSES	FLD	GRM

DES BY: BRJ/TJP
DRN BY: FLD
CHK BY: MGR
ERV BY: TJB
QRV BY: CPF
APP BY: GRM

PROJECT NO. 17365 | DATE FEBRUARY 1991
PROJECT: RESIDUALS MANAGEMENT UNIT 1
DRAWING TITLE: SUMP CONSTRUCTION GRADES

OMV CHEMICAL SERVICES, INC.
MODEL CITY, NIAGARA COUNTY, NEW YORK

FILE NO. A-55267
DRAWING NO. 13



SECONDARY SUMP UNDERCUT CONSTRUCTION CONTROL COORDINATES

POINT	NORTHING	EASTING	EL.
SU1	10011.41	10000.83	332
SU2	10011.41	10050.83	332
SU3	10011.41	10100.83	332
SU4	10011.41	10150.83	332
SU5	10011.41	10200.83	332
SU6	10011.41	10250.83	332
SU7	10011.41	10300.83	332
SU8	10011.41	10350.83	332
SU9	10011.41	10400.83	332
SU10	10011.41	10450.83	332
SU11	10011.41	10500.83	332
SU12	10011.41	10550.83	332
SU13	10011.41	10600.83	332
SU14	10011.41	10650.83	332
SU15	10011.41	10700.83	332
SU16	10011.41	10750.83	332
SU17	10011.41	10800.83	332
SU18	10011.41	10850.83	332

STATE OF NEW YORK
CHARLES P. BALLOD
LICENSED PROFESSIONAL ENGINEER
59688-1
JAN 23 1996

1/13A PLAN
SECONDARY LEACHATE COLLECTION
SUMP UNDERCUT
SCALE 1" = 5'

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE

DATE

REV.	DATE	DESCRIPTION	DRN BY	APP BY

DATE: NOVEMBER 1995 | PROJECT NO. 24262.100 | SCALE: AS SHOWN

DES BY	FAS
DRN BY	FAS
CHK BY	CPB
REV BY	AWE
APP BY	CPB

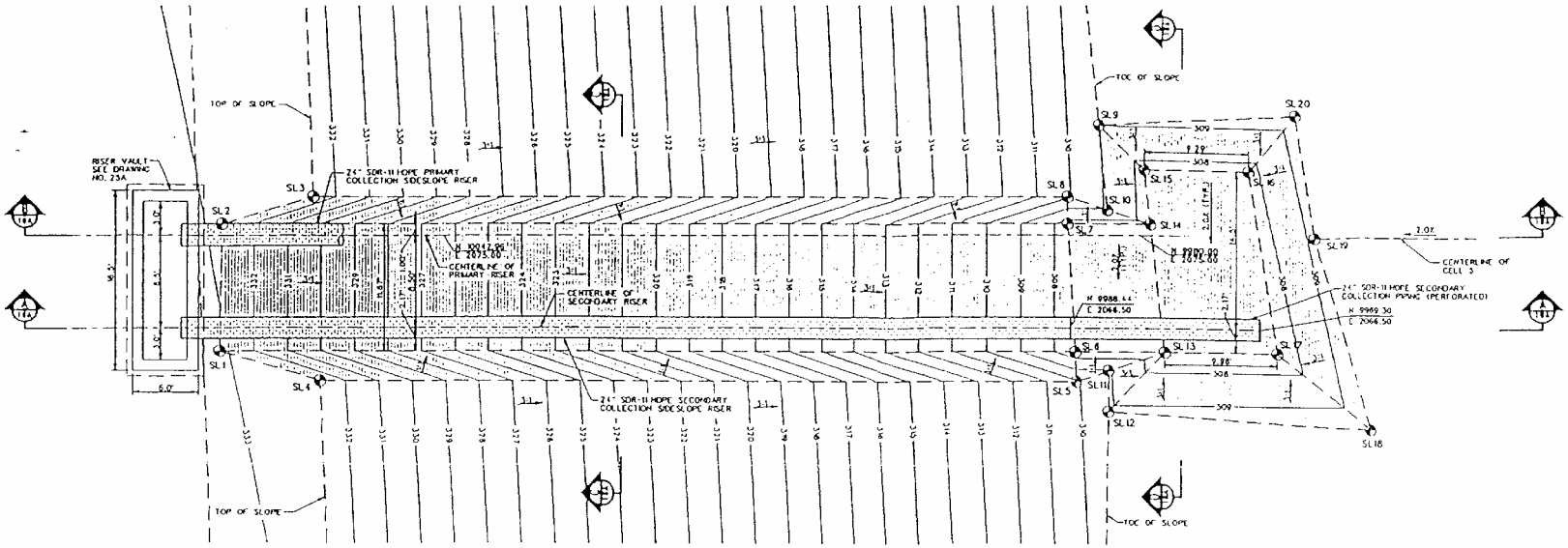
PROJECT: RESIDUALS MANAGEMENT UNIT 1 CELLS 5 AND 6

SHEET TITLE: SUMP CONSTRUCTION GRADES CELL 5

CWM Chemical Services, Inc.
Model City Facility

DRAWING NO. 13A

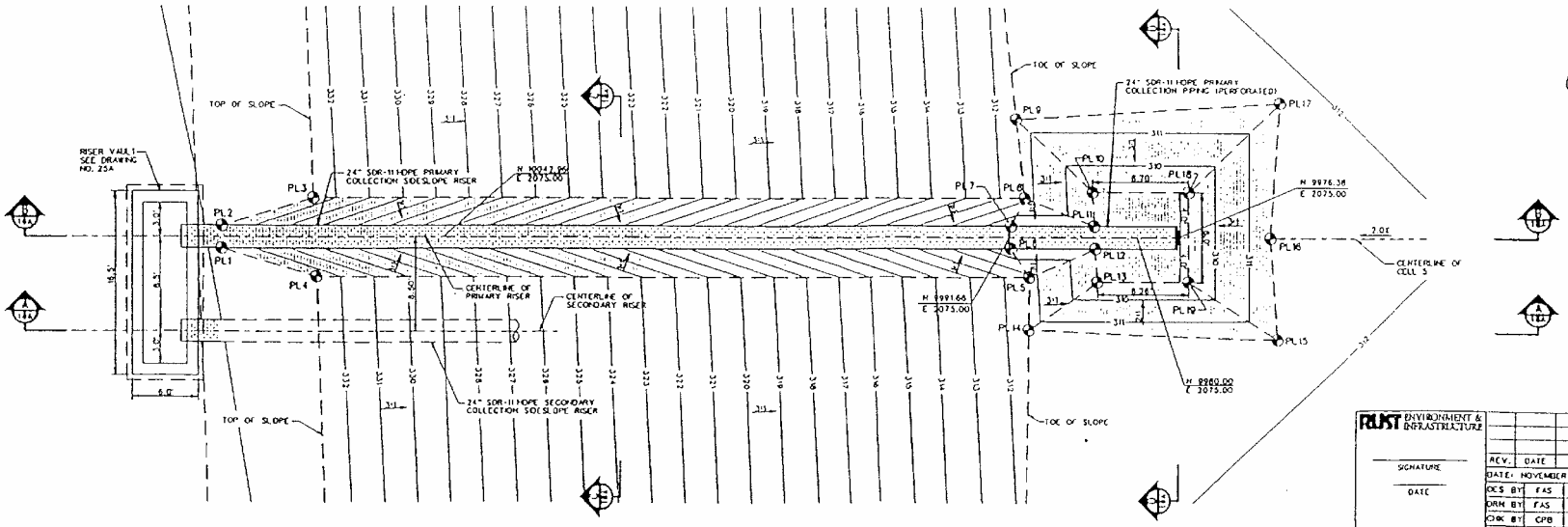
CADD PRODUCED DRAWING



1/13B PLAN
SECONDARY LEACHATE COLLECTION
SIDESLOPE RISER AND SUMP
(TOP OF SECONDARY LINER)
SCALE 1" = 5'

SECONDARY SUMP CLAY LINER CONSTRUCTION CONTROL COORDINATES

POINT	NORTHING	EASTING	EL.
1	10047.88	2075.00	330.03
2	10047.88	2071.50	330.03
3	10047.88	2068.00	330.03
4	10047.88	2064.50	330.03
5	10047.88	2061.00	330.03
6	10047.88	2057.50	330.03
7	10047.88	2054.00	330.03
8	10047.88	2050.50	330.03
9	10047.88	2047.00	330.03
10	10047.88	2043.50	330.03
11	10047.88	2040.00	330.03
12	10047.88	2036.50	330.03
13	10047.88	2033.00	330.03
14	10047.88	2029.50	330.03
15	10047.88	2026.00	330.03
16	10047.88	2022.50	330.03
17	10047.88	2019.00	330.03
18	10047.88	2015.50	330.03
19	10047.88	2012.00	330.03
20	10047.88	2008.50	330.03
21	10047.88	2005.00	330.03
22	10047.88	2001.50	330.03
23	10047.88	1998.00	330.03
24	10047.88	1994.50	330.03
25	10047.88	1991.00	330.03
26	10047.88	1987.50	330.03
27	10047.88	1984.00	330.03
28	10047.88	1980.50	330.03
29	10047.88	1977.00	330.03
30	10047.88	1973.50	330.03
31	10047.88	1970.00	330.03
32	10047.88	1966.50	330.03
33	10047.88	1963.00	330.03
34	10047.88	1959.50	330.03
35	10047.88	1956.00	330.03
36	10047.88	1952.50	330.03
37	10047.88	1949.00	330.03
38	10047.88	1945.50	330.03
39	10047.88	1942.00	330.03
40	10047.88	1938.50	330.03
41	10047.88	1935.00	330.03
42	10047.88	1931.50	330.03
43	10047.88	1928.00	330.03
44	10047.88	1924.50	330.03
45	10047.88	1921.00	330.03
46	10047.88	1917.50	330.03
47	10047.88	1914.00	330.03
48	10047.88	1910.50	330.03
49	10047.88	1907.00	330.03
50	10047.88	1903.50	330.03
51	10047.88	1900.00	330.03
52	10047.88	1896.50	330.03
53	10047.88	1893.00	330.03
54	10047.88	1889.50	330.03
55	10047.88	1886.00	330.03
56	10047.88	1882.50	330.03



2/C-18 PLAN
PRIMARY LEACHATE COLLECTION
SIDESLOPE RISER AND SUMP
(TOP OF PRIMARY LINER)
SCALE 1" = 5'

PRIMARY SUMP CLAY LINER CONSTRUCTION CONTROL COORDINATES

POINT	NORTHING	EASTING	EL.
1	10047.88	2075.00	330.03
2	10047.88	2071.50	330.03
3	10047.88	2068.00	330.03
4	10047.88	2064.50	330.03
5	10047.88	2061.00	330.03
6	10047.88	2057.50	330.03
7	10047.88	2054.00	330.03
8	10047.88	2050.50	330.03
9	10047.88	2047.00	330.03
10	10047.88	2043.50	330.03
11	10047.88	2040.00	330.03
12	10047.88	2036.50	330.03
13	10047.88	2033.00	330.03
14	10047.88	2029.50	330.03
15	10047.88	2026.00	330.03
16	10047.88	2022.50	330.03
17	10047.88	2019.00	330.03
18	10047.88	2015.50	330.03
19	10047.88	2012.00	330.03
20	10047.88	2008.50	330.03
21	10047.88	2005.00	330.03
22	10047.88	2001.50	330.03
23	10047.88	1998.00	330.03
24	10047.88	1994.50	330.03
25	10047.88	1991.00	330.03
26	10047.88	1987.50	330.03
27	10047.88	1984.00	330.03
28	10047.88	1980.50	330.03
29	10047.88	1977.00	330.03
30	10047.88	1973.50	330.03
31	10047.88	1970.00	330.03
32	10047.88	1966.50	330.03
33	10047.88	1963.00	330.03
34	10047.88	1959.50	330.03
35	10047.88	1956.00	330.03
36	10047.88	1952.50	330.03
37	10047.88	1949.00	330.03
38	10047.88	1945.50	330.03
39	10047.88	1942.00	330.03
40	10047.88	1938.50	330.03
41	10047.88	1935.00	330.03
42	10047.88	1931.50	330.03
43	10047.88	1928.00	330.03
44	10047.88	1924.50	330.03
45	10047.88	1921.00	330.03
46	10047.88	1917.50	330.03
47	10047.88	1914.00	330.03
48	10047.88	1910.50	330.03
49	10047.88	1907.00	330.03
50	10047.88	1903.50	330.03
51	10047.88	1900.00	330.03
52	10047.88	1896.50	330.03
53	10047.88	1893.00	330.03
54	10047.88	1889.50	330.03
55	10047.88	1886.00	330.03
56	10047.88	1882.50	330.03

STATE OF NEW YORK
CHARLES P. BALLOD
LICENSED PROFESSIONAL ENGINEER
59688-1
JAN 23 1996

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE

DATE

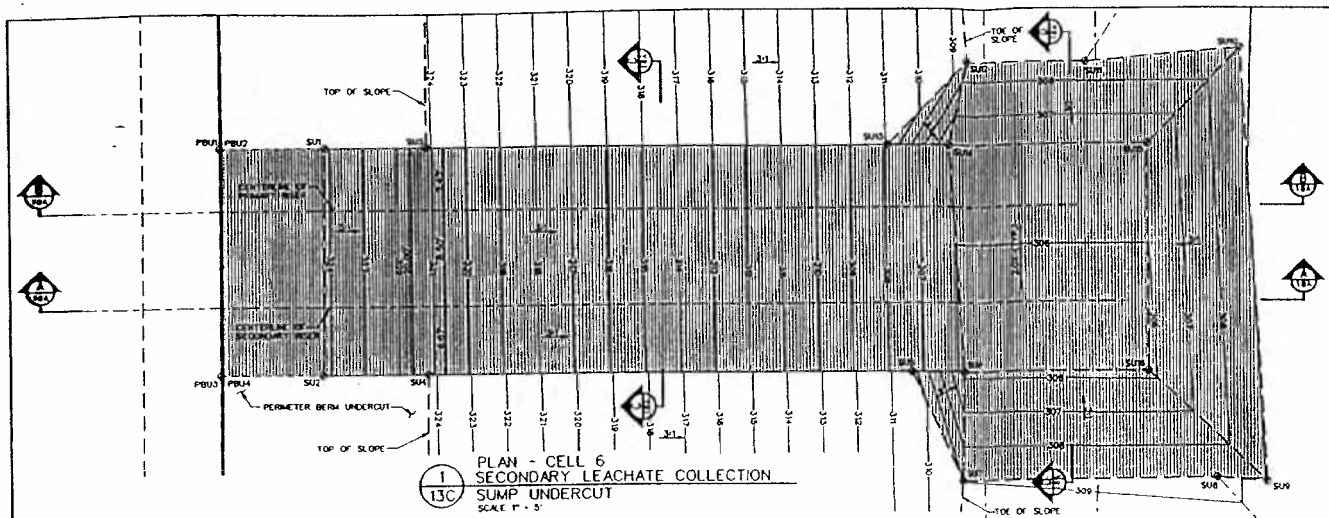
REV.	DATE	DESCRIPTION	DRN BY	APP

DATE: NOVEMBER 1995
PROJECT NO. 34282.100
SCALE: AS SHOWN
PROJECT: RESOURCE MANAGEMENT UNIT 1
DES BY: FAS
DRN BY: FAS
CHK BY: CPB
RCV BY: AWE
APP BY: CPB
SHEET TITLE: SUMP CONSTRUCTION GRADES CELL 5

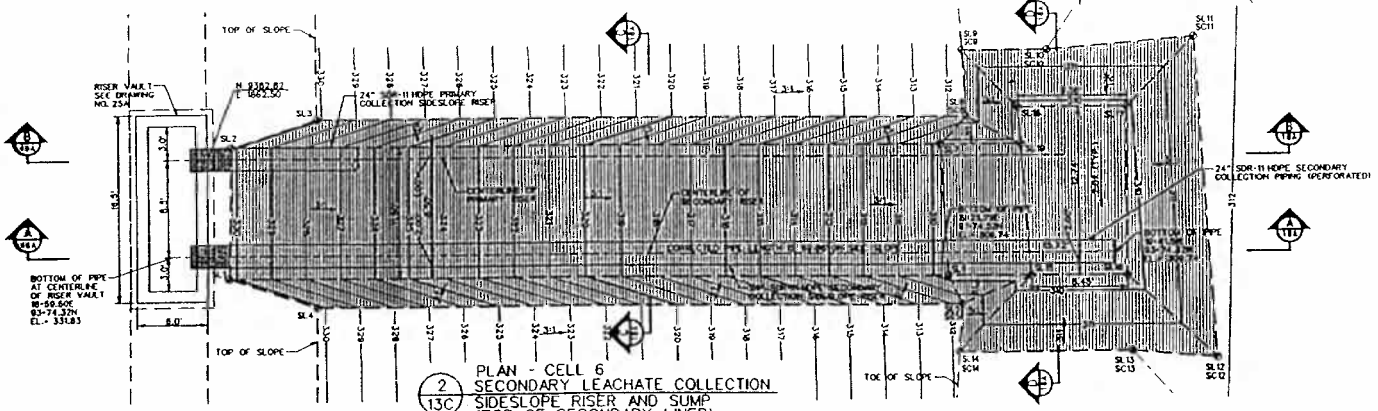
CWM Chemical Services, Inc. Model City Facility

DRAWING NO. 13B

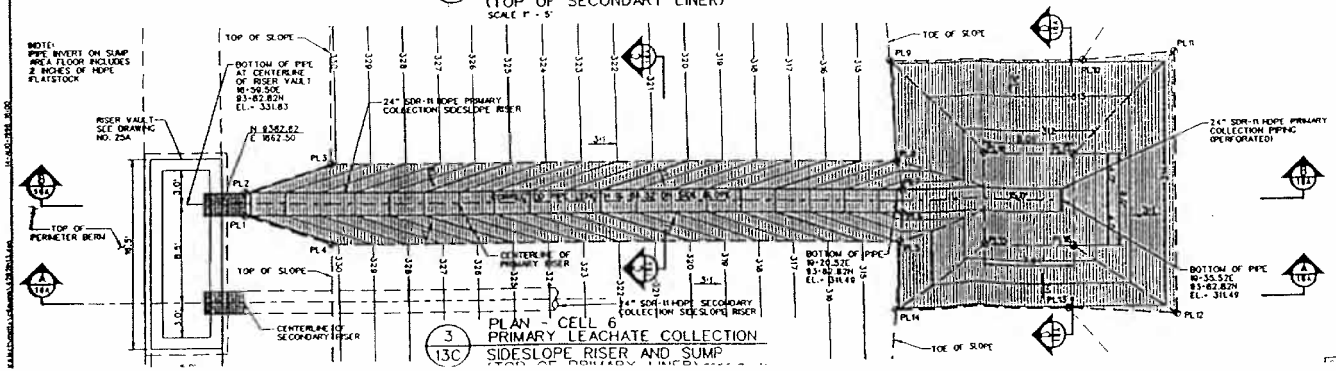
CADD PRODUCED DRAWING



1 / 13C PLAN - CELL 6 SECONDARY LEACHATE COLLECTION SUMP UNDERCUT
SCALE 1" = 5'



2 / 13C PLAN - CELL 6 SECONDARY LEACHATE COLLECTION SIDESLOPE RISER AND SUMP (TOP OF SECONDARY LINER)
SCALE 1" = 5'



3 / 13C PLAN - CELL 6 PRIMARY LEACHATE COLLECTION SIDESLOPE RISER AND SUMP

CELL 6 SECONDARY SUMP UNDERCUT CONSTRUCTION CONTROL COORDINATES

POINT	NORTHING	EASTING	EL.
SU1	9388.42	1871.56	327.14
SU2	9388.42	1860.56	327.14
SU3	9388.42	1849.56	327.14
SU4	9388.42	1838.56	327.14
SU5	9388.42	1827.56	327.21
SU6	9388.42	1816.56	327.21
SU7	9388.42	1805.56	327.21
SU8	9388.42	1794.56	327.21
SU9	9388.42	1783.56	327.21
SU10	9388.42	1772.56	327.21
SU11	9388.42	1761.56	327.21
SU12	9388.42	1750.56	327.21
SU13	9388.42	1739.56	327.21
SU14	9388.42	1728.56	327.21
SU15	9388.42	1717.56	327.21
SU16	9388.42	1706.56	327.21
PBU1	9388.42	1694.56	330.14
PBU2	9388.42	1683.56	330.14
PBU3	9388.42	1669.51	330.14
PBU4	9388.42	1658.51	330.14

NOTE: SU# - DENOTES SECONDARY SUMP UNDERCUT GRADES
PBU# - DENOTES PERIMETER BERM UNDERCUT GRADES

CELL 6 SECONDARY SUMP CLAY LINER CONSTRUCTION CONTROL COORDINATES

POINT	NORTHING	EASTING	EL.
SC1	9372.42	1864.56	330.72
SC2	9372.42	1853.56	330.72
SC3	9372.42	1842.56	330.72
SC4	9372.42	1831.56	330.72
SC5	9372.42	1820.56	330.72
SC6	9372.42	1809.56	330.72
SC7	9372.42	1798.56	330.72
SC8	9372.42	1787.56	330.72
SC9	9372.42	1776.56	330.72
SC10	9372.42	1765.56	330.72
SC11	9372.42	1754.56	330.72
SC12	9372.42	1743.56	330.72
SC13	9372.42	1732.56	330.72
SC14	9372.42	1721.56	330.72
SC15	9372.42	1710.56	330.72
SC16	9372.42	1699.56	330.72
SC17	9373.26	1688.52	331.49
SC18	9373.26	1677.52	331.49
SC19	9373.26	1666.52	331.49
SC20	9373.26	1655.52	331.49
SC21	9373.26	1644.52	331.49
SC22	9373.26	1633.52	331.49
SC23	9373.26	1622.52	331.49
SC24	9373.26	1611.52	331.49
SC25	9373.26	1600.52	331.49
SC26	9373.26	1589.52	331.49
SC27	9373.26	1578.52	331.49
SC28	9373.26	1567.52	331.49
SC29	9373.26	1556.52	331.49
SC30	9373.26	1545.52	331.49
SC31	9373.26	1534.52	331.49
SC32	9373.26	1523.52	331.49
SC33	9373.26	1512.52	331.49
SC34	9373.26	1501.52	331.49
SC35	9373.26	1490.52	331.49
SC36	9373.26	1479.52	331.49
SC37	9373.26	1468.52	331.49
SC38	9373.26	1457.52	331.49
SC39	9373.26	1446.52	331.49
SC40	9373.26	1435.52	331.49
SC41	9373.26	1424.52	331.49
SC42	9373.26	1413.52	331.49
SC43	9373.26	1402.52	331.49
SC44	9373.26	1391.52	331.49
SC45	9373.26	1380.52	331.49
SC46	9373.26	1369.52	331.49
SC47	9373.26	1358.52	331.49
SC48	9373.26	1347.52	331.49
SC49	9373.26	1336.52	331.49
SC50	9373.26	1325.52	331.49
SC51	9373.26	1314.52	331.49
SC52	9373.26	1303.52	331.49
SC53	9373.26	1292.52	331.49
SC54	9373.26	1281.52	331.49
SC55	9373.26	1270.52	331.49
SC56	9373.26	1259.52	331.49
SC57	9373.26	1248.52	331.49
SC58	9373.26	1237.52	331.49
SC59	9373.26	1226.52	331.49
SC60	9373.26	1215.52	331.49
SC61	9373.26	1204.52	331.49
SC62	9373.26	1193.52	331.49
SC63	9373.26	1182.52	331.49
SC64	9373.26	1171.52	331.49
SC65	9373.26	1160.52	331.49
SC66	9373.26	1149.52	331.49
SC67	9373.26	1138.52	331.49
SC68	9373.26	1127.52	331.49
SC69	9373.26	1116.52	331.49
SC70	9373.26	1105.52	331.49
SC71	9373.26	1094.52	331.49
SC72	9373.26	1083.52	331.49
SC73	9373.26	1072.52	331.49
SC74	9373.26	1061.52	331.49
SC75	9373.26	1050.52	331.49
SC76	9373.26	1039.52	331.49
SC77	9373.26	1028.52	331.49
SC78	9373.26	1017.52	331.49
SC79	9373.26	1006.52	331.49
SC80	9373.26	995.52	331.49
SC81	9373.26	984.52	331.49
SC82	9373.26	973.52	331.49
SC83	9373.26	962.52	331.49
SC84	9373.26	951.52	331.49
SC85	9373.26	940.52	331.49
SC86	9373.26	929.52	331.49
SC87	9373.26	918.52	331.49
SC88	9373.26	907.52	331.49
SC89	9373.26	896.52	331.49
SC90	9373.26	885.52	331.49
SC91	9373.26	874.52	331.49
SC92	9373.26	863.52	331.49
SC93	9373.26	852.52	331.49
SC94	9373.26	841.52	331.49
SC95	9373.26	830.52	331.49
SC96	9373.26	819.52	331.49
SC97	9373.26	808.52	331.49
SC98	9373.26	797.52	331.49
SC99	9373.26	786.52	331.49
SC100	9373.26	775.52	331.49
SC101	9373.26	764.52	331.49
SC102	9373.26	753.52	331.49
SC103	9373.26	742.52	331.49
SC104	9373.26	731.52	331.49
SC105	9373.26	720.52	331.49
SC106	9373.26	709.52	331.49
SC107	9373.26	698.52	331.49
SC108	9373.26	687.52	331.49
SC109	9373.26	676.52	331.49
SC110	9373.26	665.52	331.49
SC111	9373.26	654.52	331.49
SC112	9373.26	643.52	331.49
SC113	9373.26	632.52	331.49
SC114	9373.26	621.52	331.49
SC115	9373.26	610.52	331.49
SC116	9373.26	599.52	331.49
SC117	9373.26	588.52	331.49
SC118	9373.26	577.52	331.49
SC119	9373.26	566.52	331.49
SC120	9373.26	555.52	331.49
SC121	9373.26	544.52	331.49
SC122	9373.26	533.52	331.49
SC123	9373.26	522.52	331.49
SC124	9373.26	511.52	331.49
SC125	9373.26	500.52	331.49
SC126	9373.26	489.52	331.49
SC127	9373.26	478.52	331.49
SC128	9373.26	467.52	331.49
SC129	9373.26	456.52	331.49
SC130	9373.26	445.52	331.49
SC131	9373.26	434.52	331.49
SC132	9373.26	423.52	331.49
SC133	9373.26	412.52	331.49
SC134	9373.26	401.52	331.49
SC135	9373.26	390.52	331.49
SC136	9373.26	379.52	331.49
SC137	9373.26	368.52	331.49
SC138	9373.26	357.52	331.49
SC139	9373.26	346.52	331.49
SC140	9373.26	335.52	331.49

CELL 6 SECONDARY SUMP COLLECTION LAYER CONSTRUCTION CONTROL COORDINATES

POINT	NORTHING	EASTING	EL.
SC1	9372.26	1877.56	332.62
SC2	9372.26	1866.56	332.62
SC3	9372.26	1855.56	332.62
SC4	9372.26	1844.56	332.62
SC5	9372.26	1833.56	332.62
SC6	9372.26	1822.56	332.62
SC7	9372.26	1811.56	332.62
SC8	9372.26	1800.56	332.62
SC9	9372.26	1789.56	332.62
SC10	9372.26	1778.56	332.62
SC11	9372.26	1767.56	332.62
SC12	9372.26	1756.56	332.62
SC13	9372.26	1745.56	332.62
SC14	9372.26	1734.56	332.62
SC15	9372.26	1723.56	332.62
SC16	9372.26	1712.56	332.62

SEE NOTE 2

CELL 6 PRIMARY SUMP CLAY LINER CONSTRUCTION CONTROL COORDINATES

POINT	NORTHING	EASTING	EL.
PL1	9381.42	1864.56	330.72
PL2	9381.42	1853.56	330.72
PL3	9381.42	1842.56	330.72
PL4	9381.42	1831.56	330.72
PL5	9381.42	1820.56	330.72
PL6	9381.42	1809.56	330.72
PL7	9381.42	1798.56	330.72
PL8	9381.42	1787.56	330.72
PL9	9381.42	1776.56	330.72
PL10	9381.42	1765.56	330.72
PL11	9381.42	1754.56	330.72
PL12	9381.42	1743.56	330.72
PL13	9381.42	1732.56	330.72
PL14	9381.42	1721.56	330.72
PL15	9381.42	1710.56	330.72
PL16	9381.42	1699.56	330.72
PL17	9382.26	1688.52	331.49
PL18	9382.26	1677.52	331.49
PL19	9382.26	1666.52	331.49
PL20	9382.26	1655.52	331.49
PL21	9382.26	1644.52	331.49
PL22	9382.26	1633.52	331.49
PL23	9382.26	1622.52	331.49
PL24	9382.26	1611.52	331.49
PL25	9382.26	1600.52	331.49
PL26	9382.26	1589.52	331.49
PL27	9382.26	1578.52	331.49
PL28	9382.26	1567.52	331.49
PL29	9382.26	1556.52	331.49
PL30	9382.26	1545.52	331.49
PL31	9382.26	1534.52	331.49
PL32	9382.26	1523.52	331.49
PL33	9382.26	1512.52	331.49
PL34	9382.26	1501.52	331.49
PL35	9382.26	1490.52	331.49
PL36	9382.26	1479.52	331.49
PL37	9382.26	1468.52	331.49
PL38	9382.26	1457.52	331.49
PL39	9382.26	1446.52	331.49
PL40	9382.26	1435.52	331.49
PL41	9382.26	1424.52	331.49
PL42	9382.26	1413.52	331.49
PL43	9382.26	1402.52	331.49
PL44	9382.26	1391.52	331.49
PL45	9382.26	1380.52	331.49
PL46	9382.26	1369.52	331.49
PL47	9382.26	1358.52	331.49
PL48	9382.26	1347.52	331.49
PL49	9382.26	1336.52	331.49
PL50	9382.26	1325.52	331.49
PL51	9382.26	1314.52	331.49
PL52	9382.26	1303.52	331.49
PL53	9382.26	1292.52	331.49
PL54	9382.26	1281.52	331.49
PL55	9382.26	1270.52	331.49
PL56	9382.26	1259.52	331.49
PL57	9382.26	1248.52	331.49
PL58	9382.26	1237.52	331.49
PL59	9382.26	1226.52	331.49
PL60	9382.26	1215.52	331.49
PL61	9382.26	1204.52	331.49
PL62	9382.26	1193.52	331.49
PL63	9382.26	1182.52	331.49
PL64	9382.26	1171.52	331.49
PL65	9382.26	1160.52	331.49
PL66	9382.26	1149.52	331.49
PL67	9382.26	1138.52	331.49
PL68	9382.26	1127.52	331.49
PL69	9382.26	1116.52	331.49
PL70	9382.26	1105.52	331.49
PL71	9382.26	1094.52	331.49
PL72	9382.26	1083.52	331.49
PL73	9382.26	1072.52	331.49
PL74	9382.26	1061.52	331.49
PL75	9382.26	1050.52	331.49
PL76	9382.26	1039.52	331.49
PL77	9382.26	1028.52	331.49
PL78	9382.26	1017.52	331.49
PL79	9382.26	1006.52	331.49
PL80	9382.26	995.52	331.49
PL81	9382.26	984.52	331.49
PL82	9382.26	973.52	331.49
PL83	9382.26	962.52	331.49
PL84	9382.26	951.52	331.49
PL85	9382.26	940.52	331.49
PL86	9382.26	929.52	331.49
PL87	9382.26	918.52	331.49
PL88	9382.26	907.52	331.49
PL89	9382.26	896.52	331.49
PL90	9382.26	885.52	331.49
PL91	9382.26	874.52	331.49
PL92	9382.26	863.52	331.49
PL93	9382.26	852.52	331.49
PL94	9382.26	841.52	331.49
PL95	9382.26	830.52	331.49
PL96	9382.26	819.52	331.49
PL97	9382.26	808.52	331.49
PL98	9382.26	797.52	331.49
PL99	9382.26	786.52	331.49
PL100	9382.26	775.52	331.49
PL101	9382.26	764.52	331.49
PL102	9382.26	753.52	331.49
PL103	9382.26	742.52	331.49
PL104	9382.26	731.52	331.49
PL105	9382.26	720.52	331.49
PL106	9382.26	709.52	331.49
PL107	9382.26	698.52	331.49
PL108	9382.26	687.52	331.49
PL109	9382.26	676.52	331.49
PL110	9382.26	665.52	331.49
PL111	9382.26	654.52	331.49
PL112	9382.26	643.52	331.49
PL113	9382.26	632.52	331.49
PL114	9382.26	621.52	331.49
PL115	9382.26	610.52	331.49
PL116	9382.26	599.52	331.49
PL117	9382.26	588.52	331.49
PL118	9382.26	577.52	331.49
PL119	9382.26	566.52	331.49
PL120	9382.26	555.52	331.49
PL121	9382.26	544.52	331.49
PL122	9382.26	533.52	331.49
PL123	9382.26	522.52	331.49
PL124	9382.26	511.52	331.49
PL125	9382.26	500.52	331.49
PL126	9382.26	489.52	331.49
PL127	9382.26	478.52	331.49
PL128	9382.26	467.52	331.49
PL129	9382.26	456.52	331.49
PL130	9382.26	445.52	331.49
PL131	9382.26	434.52	331.49
PL132	9382.26	423.52	331.49
PL133	9382.26	412.52	331.49
PL134	9382.26	401.52	331.49
PL135	9382.26	390.52	331.49
PL136	9382.26	379.52	331.49
PL137	9382.26	368.52	331.49
PL138	9382.26	357.52	331.49
PL139	9382.26	346.52	331.49
PL140	9382.26	335.52	331.49

STATE OF NEW YORK
CHARLES P. BALLOD
LICENSED PROFESSIONAL ENGINEER
59588-1
AUG 14 1996

NOTES:
1. COORDINATES OF RISER PIPES MAY VARY IN THE FIELD. AS-BUILT LOCATIONS AND ELEVATIONS WILL BE PROVIDED WITH THE CELL CERTIFICATION REPORT.
2. SECONDARY COLLECTION POINTS (SC) ARE DIRECTLY ABOVE TOP OF SECONDARY CLAY. SEE DETAIL D, DWG. 18A.

RUST ENVIRONMENT & INFRASTRUCTURE

SIGNATURE

DATE

REV.	DATE	DESCRIPTION	DRN BY	APP BY
1	8/96	MODIFIED COORDINATES	FAS	CPB
2	1/96	ADD TOP OF SECONDARY COLLECTION	FAS	CPB

DATE: NOVEMBER 1995 | PROJECT NO. 34782.300 | SCALE: AS SHOWN
DES BY FAS | DRN BY FAS | CHK BY CPB | REV BY AWE | APP BY CPB
PROJECT: RESIDUALS MANAGEMENT UNIT 1
SHEET TITLE: SUMP CONSTRUCTION GRADES CELL 6

CWM Chemical Services, Inc. Model City Facility

DRAWING NO. 13C