Department of Energy

Ohio Field Office
Fernald Area Office
P. O. Box 538705
Cincinnati, Ohio 45253-8705
(513) 648-3155

[redacted]

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31 JAN 2002

Mr. James A. Saric, Remedial Project Manager
United States Environmental Protection Agency
Region V, SRF-5J
77 West Jackson Boulevard
Chicago, IL 60604-3590

DOE-0284-02

Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, OH 45402-2911

Dear Mr. Saric and Mr. Schneider:

TRANSMITTAL OF THE OCTOBER-NOVEMBER-DECEMBER 2001 MONTHLY REPORT FOR IMPACTED MATERIAL PLACEMENT AT THE ON-SITE DISPOSAL FACILITY

Enclosed for your information is the October-November-December 2001 Monthly Report for Impacted Material Placement at the On-Site Disposal Facility (OSDF). Impacted material placement continued through Tuesday, December 11, 2001 for the current construction season. The following information is included:

- Air monitoring sampling data for October, November, and December 2001 readings from the OSDF, Southern Waste Units, and Haul Road;
- Leachate Conveyance System and Leak Detection System (LDS) data for cell-specific uranium concentrations through the month of December;
- OSDF Cells 1 and 2 LDS weekly accumulation rate versus cumulative impacted material placement volume graph through the month of December.
- Placement graphs for:
  - October-November-December Category 1 Soil Placement versus Projected Placement in-place cubic yards (icy)
  - October-November-December Debris Placement versus Projected Placement (icy)

- October-November-December Total Placement versus Projected Placement (icy)

- October-November-December Total Placement versus Projected Placement in bank cubic yards (bcy)

- Current surface plan views - Cell 2 and Cell 3 plan views showing the current lift of impacted material as of December 11, 2001.

- OSDF Cross sections - Selected cross sections looking north and west showing placement progress.

Summary

Approximately 35,000 icy of impacted material have been placed in the months of October, November, and December 2001. This quantity is based upon survey data. Approximately 69,500 icy have been placed for the entire 2001 construction season. The enclosed graphs reflect estimated in-place quantities based on shrinkage factors for compaction and debris bulking factors. The estimated quantities on the graphs closely match the surveyed quantity. As shown on the graphs, total soil and debris placement has made a steady climb to reach projected schedule. The final actual total impacted material placement is within 5 percent of the projected impacted material placement total. The actual schedule extended past the projected end of placement scheduled time due to the fact that excavation and placement of the Lime Sludge Pond material was not completed and, therefore, was deleted from the projected schedule. The Lime Sludge Pond material was anticipated to be placed in October. Due to rainy weather and limited workdays due to holidays, impacted material placement was sparse in November and December.

Cell 2 is at approximately 65 percent of its impacted material storage capacity. Cell 3 has reached approximately 25 percent of its impacted material storage capacity.

Other activities within the cells included staging Category 1 material within Cell 3 in accordance with the Impacted Material Placement Plan (IMPP) to ease the placement of debris from the excavated leachate transmission line. The entire Category 1 material staging pile was placed in accordance with the IMPP by the end of the construction season. The subcontractor also placed material in the Cell 2 catchment area to an elevation where stormwater from Cell 2 is now being diverted to the Cell 3 catchment area.

The current surface plans for Cells 2 and 3 show the category of impacted material placed in each grid. The latest lift is noted on the grid and the date it was placed. Grids with the same lift number will not necessarily contain the same category of material.

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If you have any questions or need further information, please contact Jay Jalovec at (513) 648-3122.

Sincerely,

Johnny Reising

Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Jalovec

Enclosures: As Stated

cc w/ enclosures:
J. Jalovec, OH/FEMP
R. Janke, OH/FEMP
T. Schneider, OEPA-Dayton (three copies of enclosures)
F. Hodge, Tetra Tech
AR Coordinator, Fluor Fernald, Inc./MS78

cc w/o enclosures:
R. Greenberg, EM-31/CLOV
N. Hallein, EM-31/CLOV
R. J. Bell, OH/FEMP
D. Pfister, OH/FEMP
J. Reising, OH/FEMP
A. Tanner, OH/FEMP
G. Jablonowski, USEPA-V, SRF-5J
F. Bell, ATSDR
M. Schupe, HSI GeoTrans
R. Vandegrift, ODH
K. Badu-Tweneboah, GeoSyntec/MS38
D. Carr, Fluor Fernald, Inc./MS2
J. Chiou, Fluor Fernald, Inc./MS64
T. Hagen, Fluor Fernald, Inc./MS65-2
K. Harbin, Fluor Fernald, Inc./MS64
U. Kumthekar, Fluor Fernald, Inc./MS64
S. Lorenz, Fluor Fernald, Inc./MS52-5
A. Snider, Fluor Fernald, Inc./MS64
C. Van Arsdale, Fluor Fernald, Inc./MS64
T. Walsh, Fluor Fernald, Inc./MS81-2
D. Whisler, Fluor Fernald, Inc./MS64
W. Zebick, Fluor Fernald, Inc./MS64
ECDC, Fluor Fernald, Inc./MS52-7

On Site Disposal Facility - October

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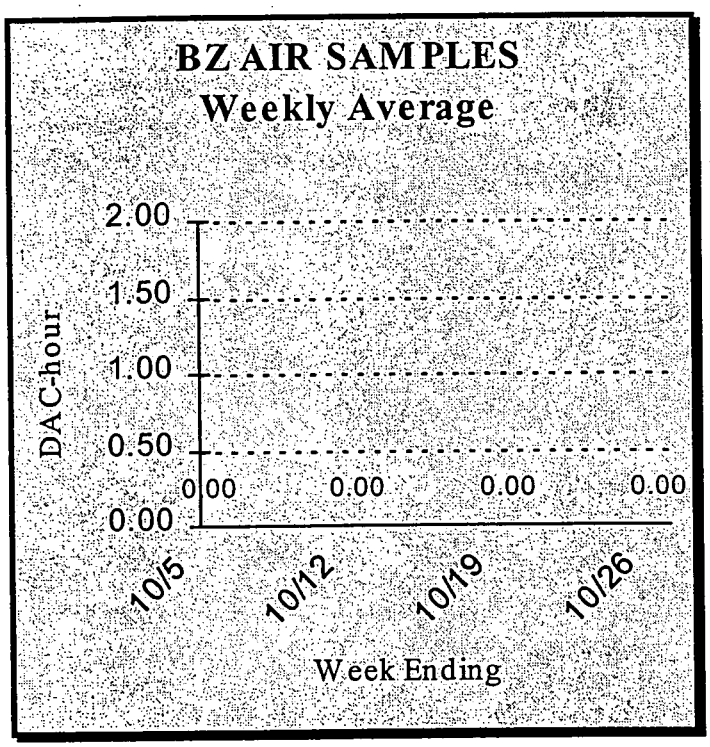
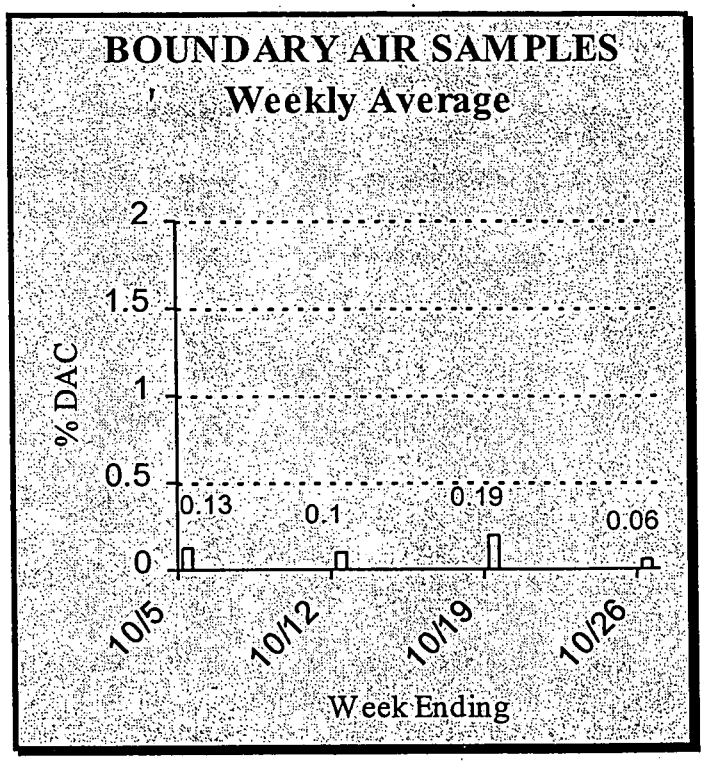




Project Activities and Events

- Performance of OSDF impacted material placement
- Impacted material placement started on 8-15-01
- materials being placed in inter cell berm of 2&3 and also in cell2 catchment area
- placement of lime sludge discontinued due to moisture.

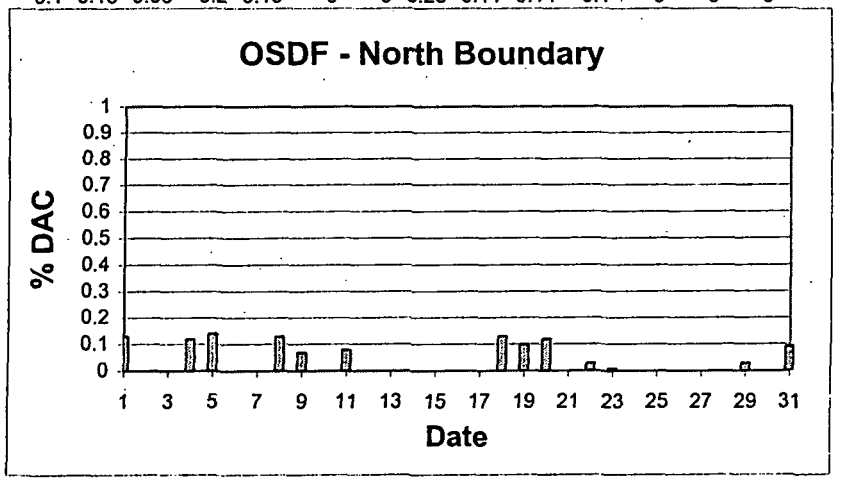
Engineering and Administrative Controls

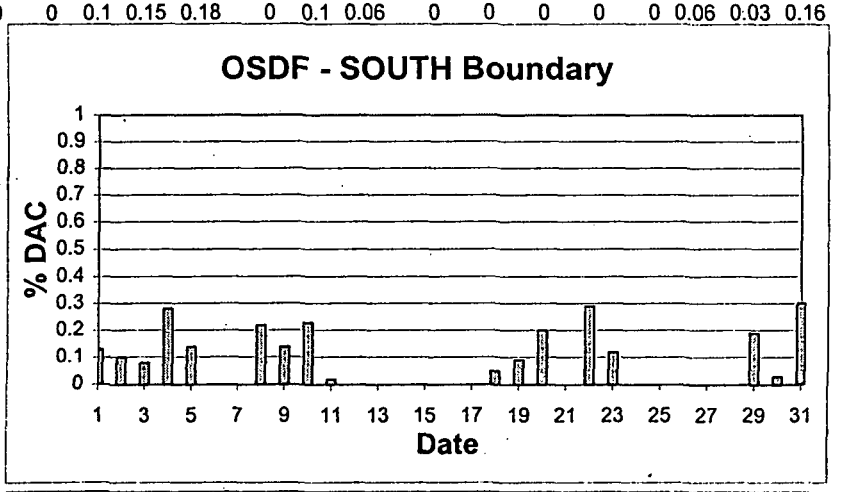
- Water used for dust control in work areas
- Workers remain safe working distance from operating equipment and upwind of potential dust generating activities

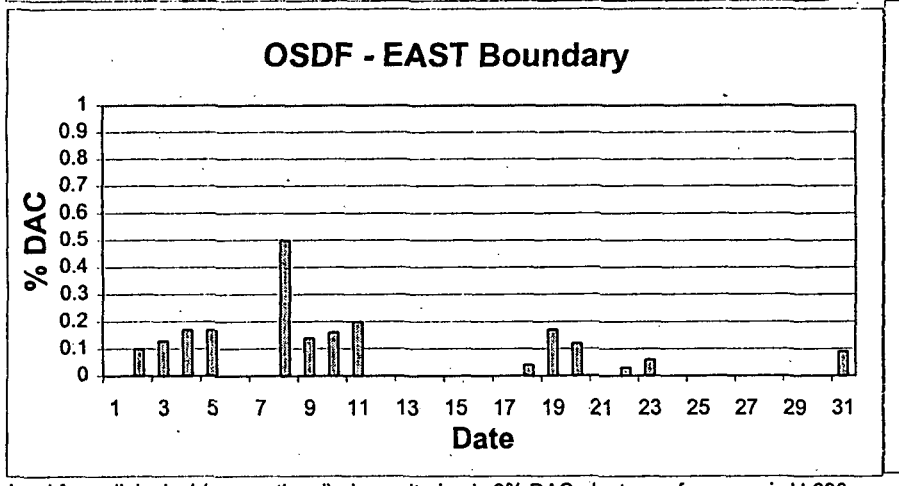
Note: BZA limit - 12 DAC-hrs/week; Boundary limit - 2% DAC averaged over a week

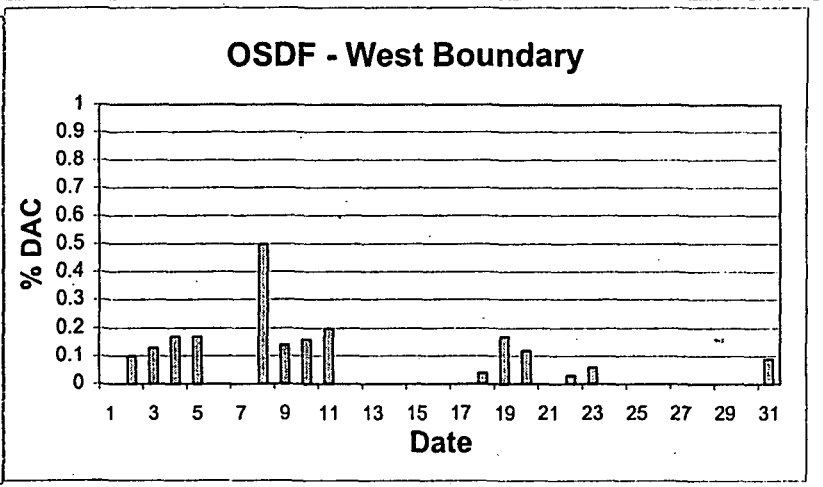
OSDF BOUNDARY AIR SAMPLES October 2001

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
N. BNDY	0.13	0	0	0.12	0.14			0.13	0.07	0	0.08							0.13	0.1	0.12		0.03	0.01						0.03	0	0.09
S.BNDY	0.13	0.41	0	0.23	0.31			0.08	0.07	0.15	0.08							0.17	0.22	0.29		0.03	0.05						0	0.1	0.16
E. BNDY	0.13	0.1	0.08	0.28	0.14			0.22	0.14	0.23	0.02							0.05	0.09	0.2		0.29	0.12						0.19	0.03	0.3
W. BNDY	0	0.1	0.13	0.17	0.17			0.5	0.14	0.16	0.2							0.04	0.17	0.12		0.03	0.06						0	0	0.09
days sum	0.39	0.61	0.21	0.80	0.76	0.00	0.00	0.93	0.42	0.54	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.58	0.73	0.00	0.38	0.24	0.00	0.00	0.00	0.00	0.00	0.22	0.13	0.64
days avg	0.1	0.15	0.05	0.2	0.19	0	0	0.23	0.11	0.14	0.1	0	0	0		0	0	0.1	0.15	0.18	0	0.1	0.06	0	0	0	0	0	0.06	0.03	0.16









Action level for radiological (occupational) air monitoring is 2% DAC. Isotope of concern is U-238; associated DAC is 2E-11 uCi/ml.

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On Site Disposal Facility - November

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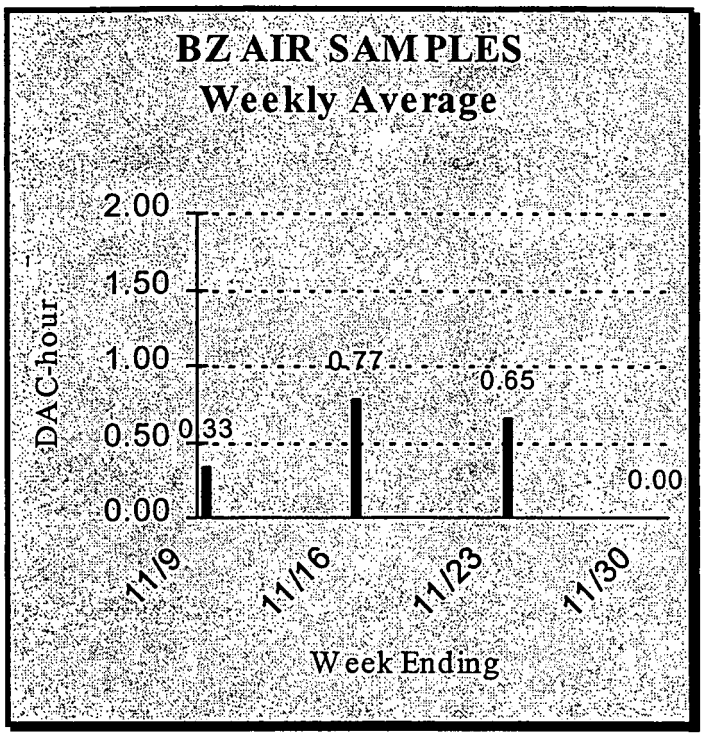
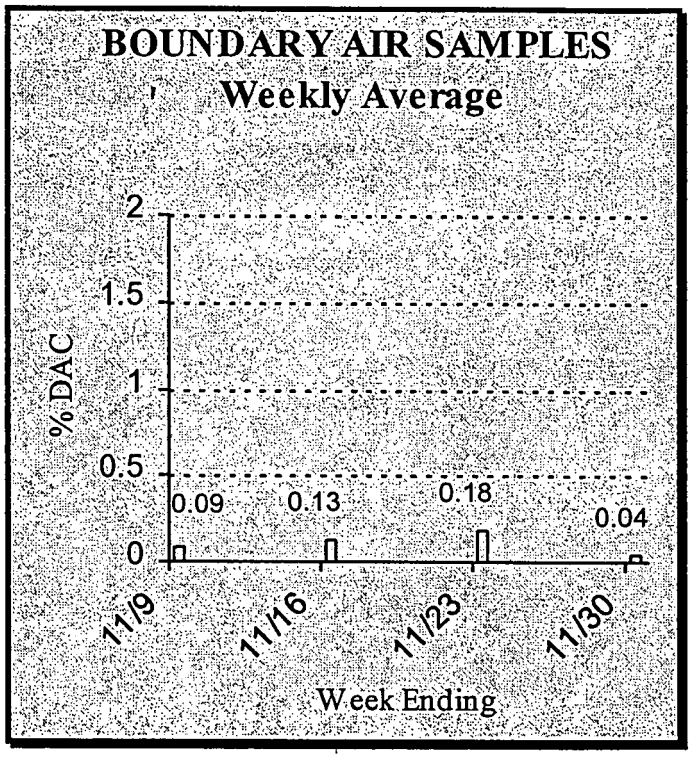




Project Activities and Events

- Performance of OSDF impacted material placement
- Impacted material placement started on 8-15-01
- Materials from leachate project being placed

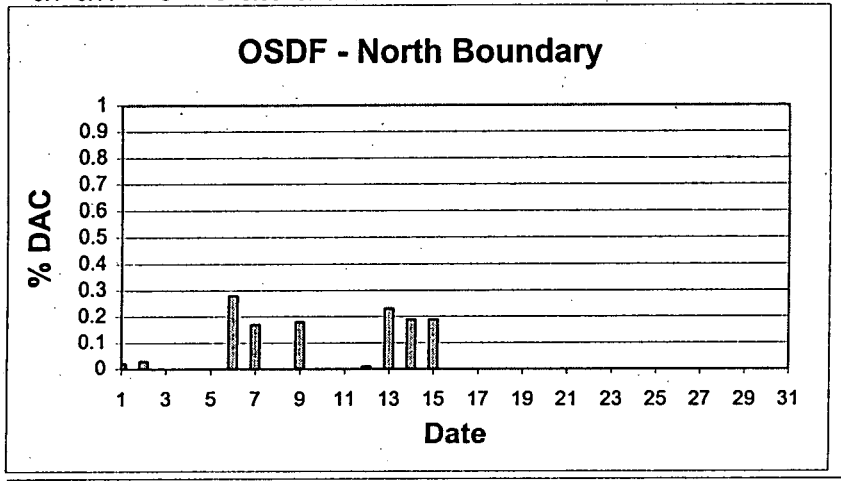
Engineering and Administrative Controls

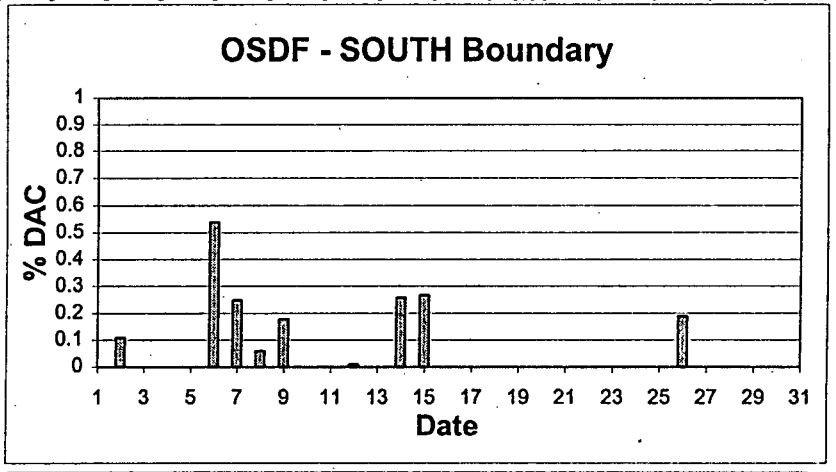
- Water used for dust control in work areas
- Workers remain safe working distance from operating equipment and upwind of potential dust generating activities

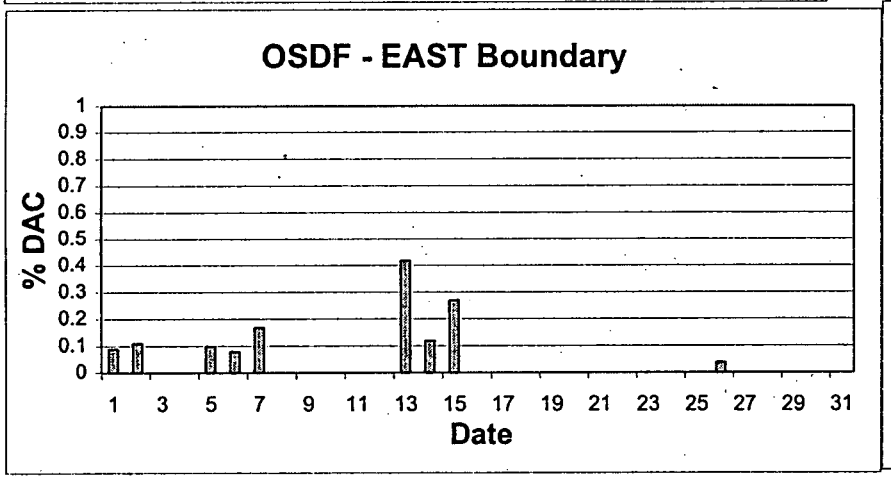
Note: BZA limit - 12 DAC-hrs/week; Boundary limit - 2% DAC averaged over a week

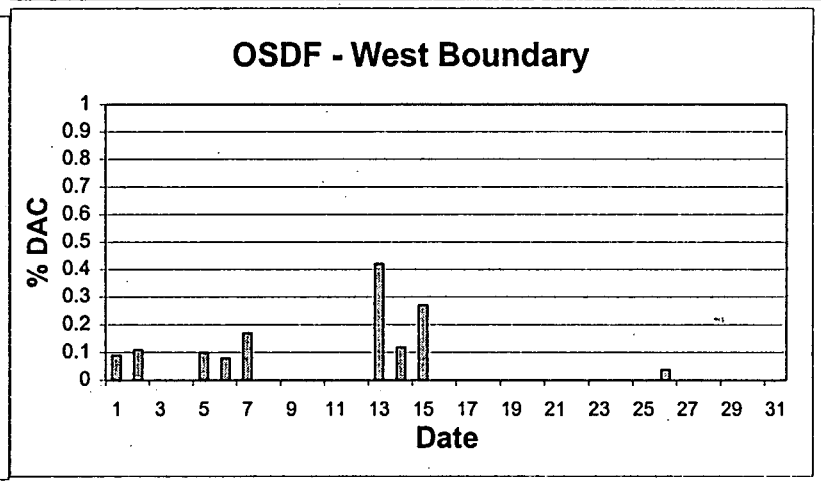
OSDF BOUNDARY AIR SAMPLES -November 2001

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
N. BNDY	0.02	0.03			0.00	0.28	0.17	0	0.18			0.01	0.23	0.19	0.19											0					
S.BNDY	0.3	0.19			0.00	0.08	0.17	0.13	0.28			0.08	0.05	0.05	0.82											0					
E. BNDY	0	0.11			0.00	0.54	0.25	0.06	0.18			0.01	0	0.26	0.27											0.19					
W. BNDY	0.09	0.11			0.10	0.08	0.17	0	0			0	0.42	0.12	0.27											0.04					
days sum	0.41	0.44	0.00	0.00	0.10	0.98	0.76	0.19	0.64	0.00	0.00	0.10	0.70	0.62	1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.00
days avg	0.1	0.11	0	0	0.03	0.25	0.19	0.05	0.16	0	0	0.03	0.18	0.16		0	0	0	0	0	0	0	0	0	0	0.06	0	0	0	0	0









Action level for radiological (occupational) air monitoring is 2% DAC. Isotope of concern is U-238; associated DAC is 2E-11 uCi/ml.

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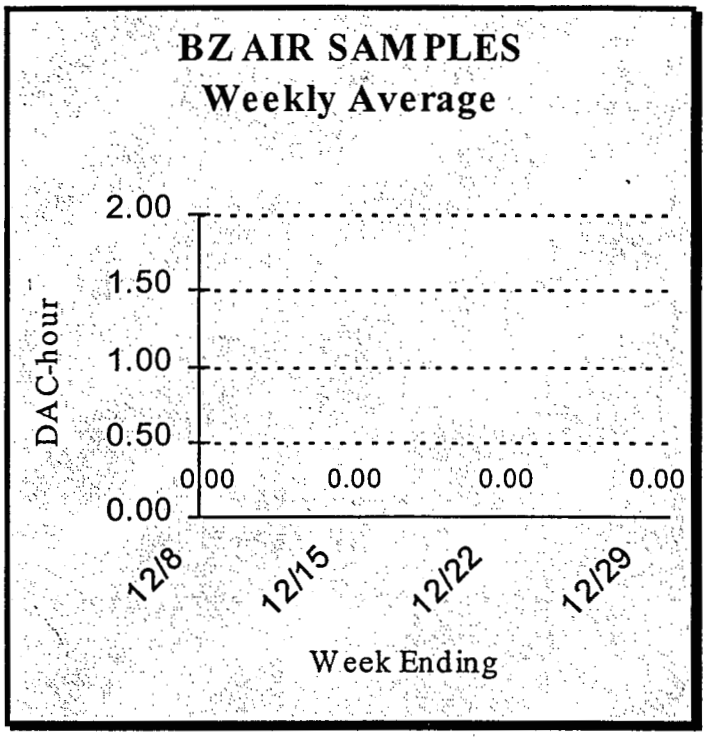
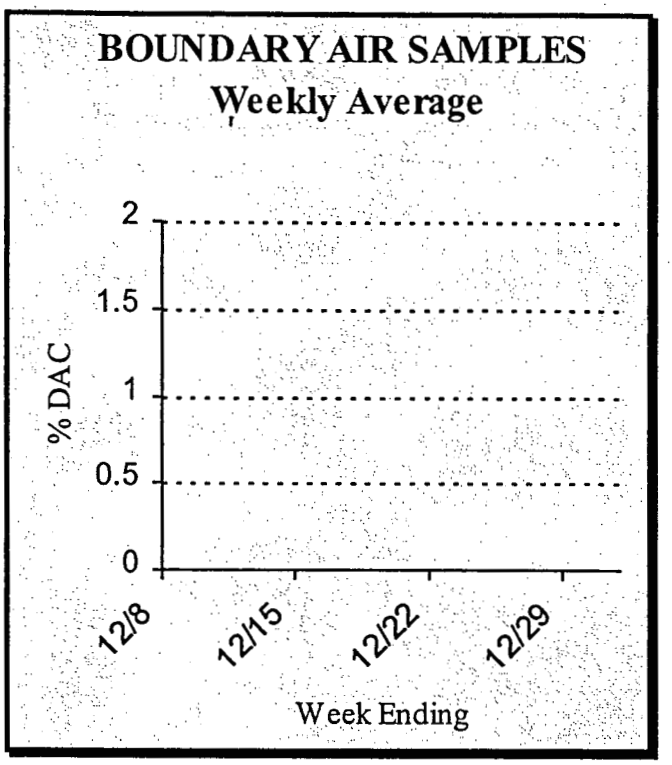
On Site Disposal Facility - December





Project Activities and Events

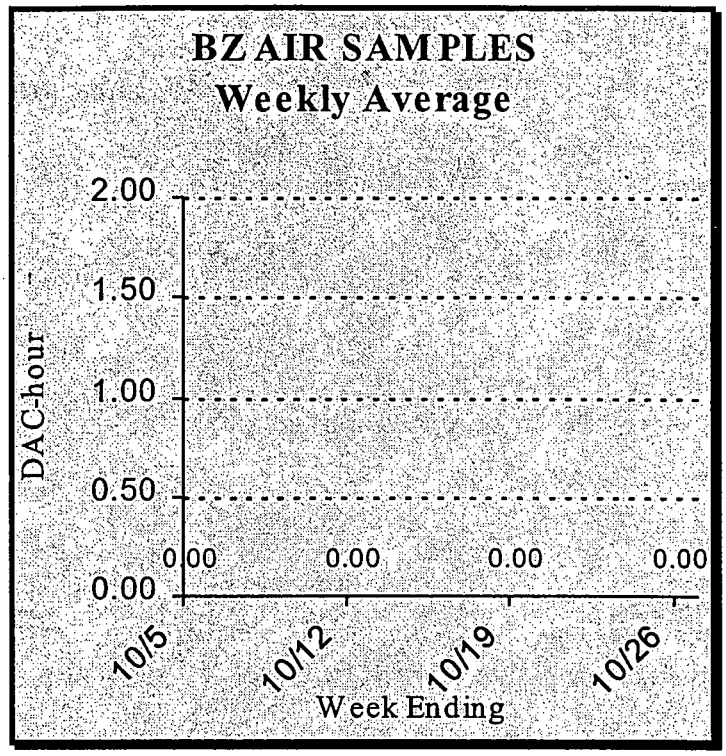
- Impacted materials placement stopped in November 2001
- Air monitoring stopped in November for impacted material placement.
- An evaluation of radioactive materials from Leachate line and impacted soil surrounding line have been reviewed.Based on this evaluation no air monitoring will be required for removal of materials or for cell placement.

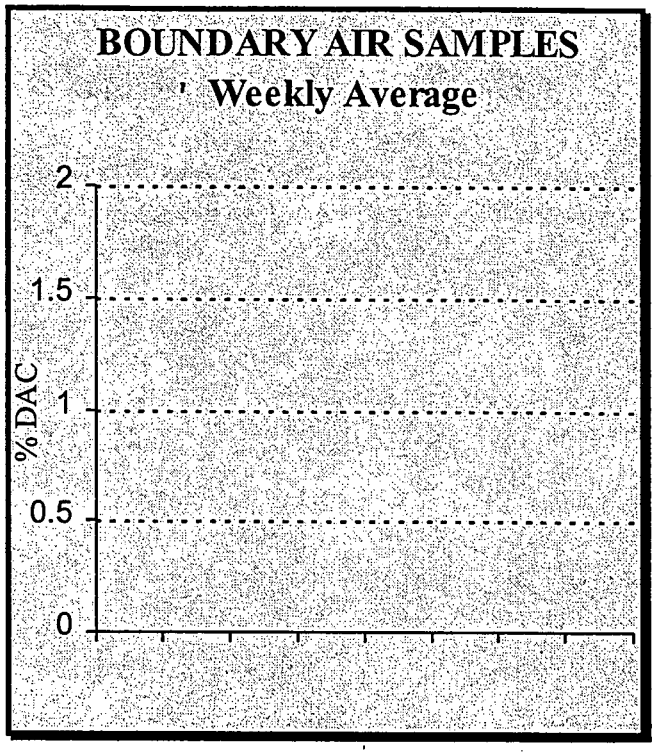
Engineering and Administrative Controls

- Water used for dust control in work areas
- Workers remain safe working distance from operating equipment and upwind of potential dust generating activities

Note: BZA limit - 12 DAC-hrs/week; Boundary limit - 2% DAC averaged over a week

Southern Waste Units - October





Project Activities and Events

- Hauling from impacted stock piles within the south field
- materials from Carolina area
- materials from turnaround pile

Engineering and Administrative Controls

- Water application for dust control;
- Controlled loading of equipment to prevent the spread of contamination

- Note: BZA limit -12 DAC-hrs/week; Boundary limit - 2% DAC averaged over a week

Southern Waste Units - November

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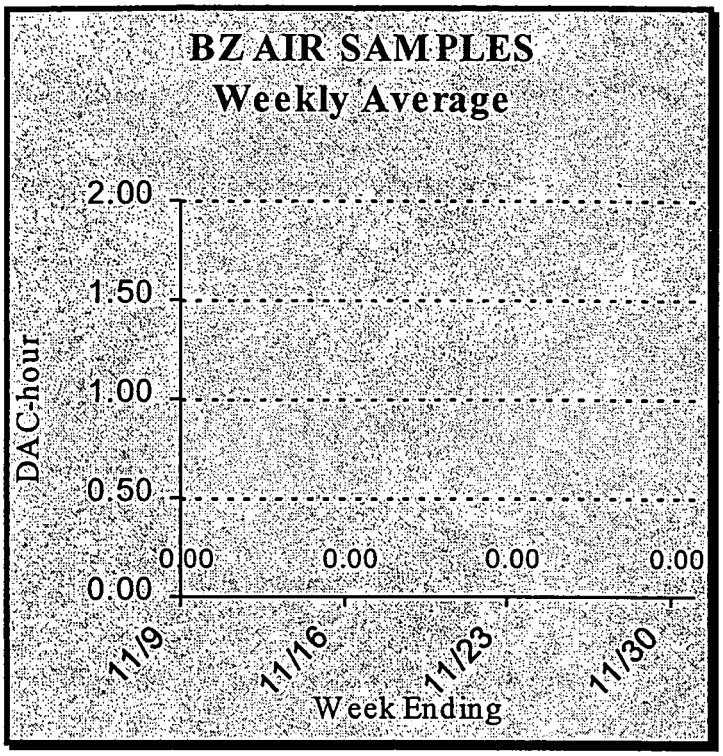

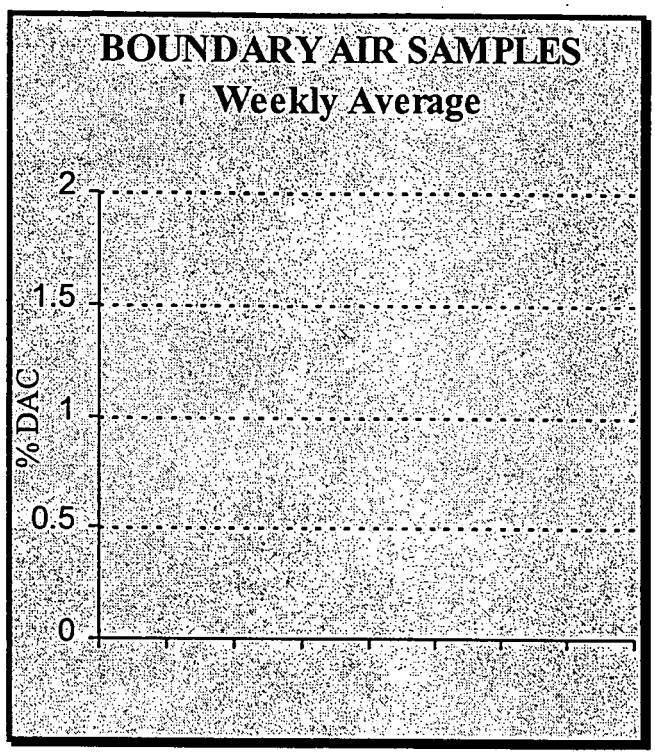

Project Activities and Events

- Hauling of materials from southern waste units complete
- Final grade of area complete
- Area down posted from a high contamination area,in preparation for certification sampling.

Engineering and Administrative Controls

- Water application for dust control;
- Controlled loading of equipment to prevent the spread of contamination
- Note: BZA limit -12 DAC-hrs/week; Boundary limit - 2% DAC averaged over a week

Southern Waste Units - December

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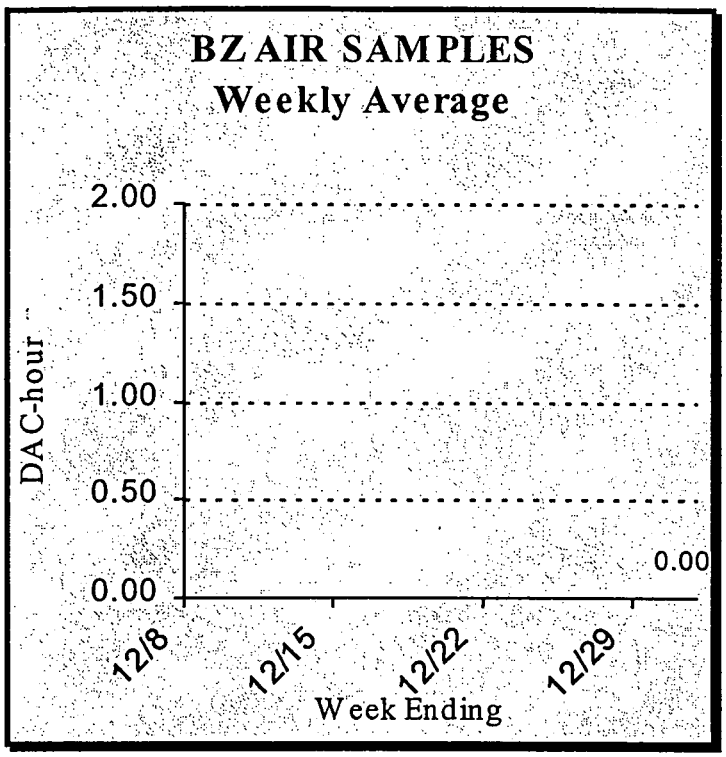
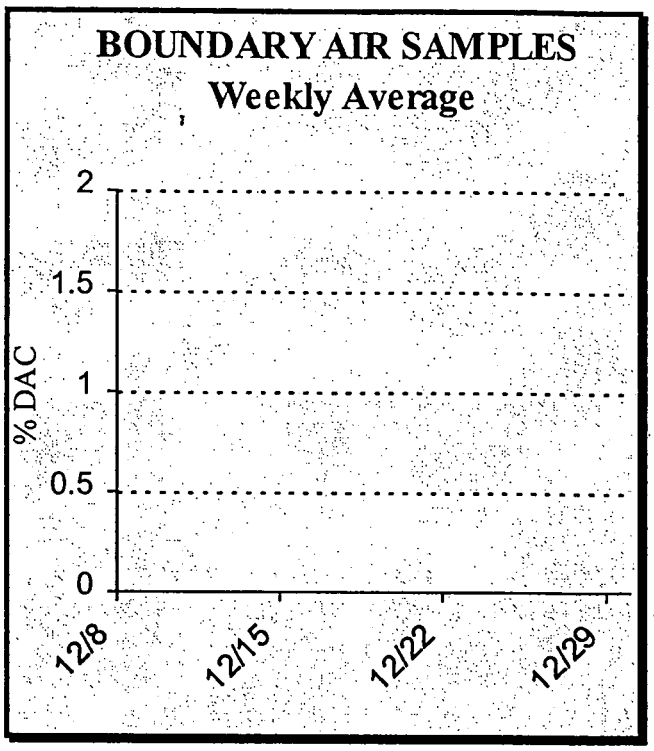




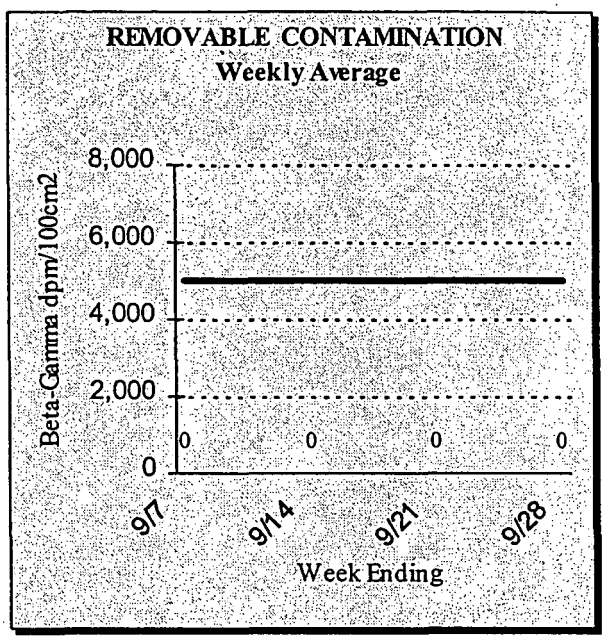
Project Activities and Events

- Hauling of materials from southern waste units complete
- Final grade of area complete
- Area down posted from a high contamination area,in preparation for certification sampling.

Engineering and Administrative Controls

- Water application for dust control;
- Controlled loading of equipment to prevent the spread of contamination
- Note: BZA limit -12 DAC-hrs/week; Boundary limit - 2% DAC averaged over a week

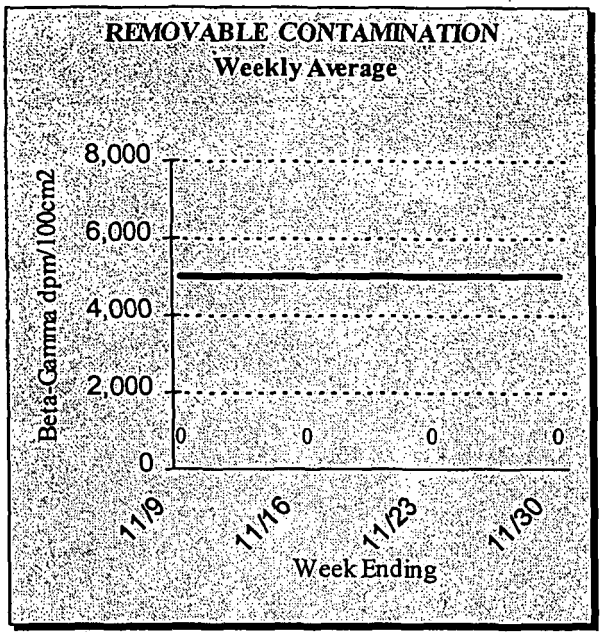
Haul road-October



Project Activities and Events
•Hauling from south field •Load out from soil piles 1 and 4

Engineering and Administrative Controls
•Water application for dust control; •Controlled loading of equipment to prevent the spread of contamination •Contamination action levels are 1,000 dpm/100cm2 loose surface.

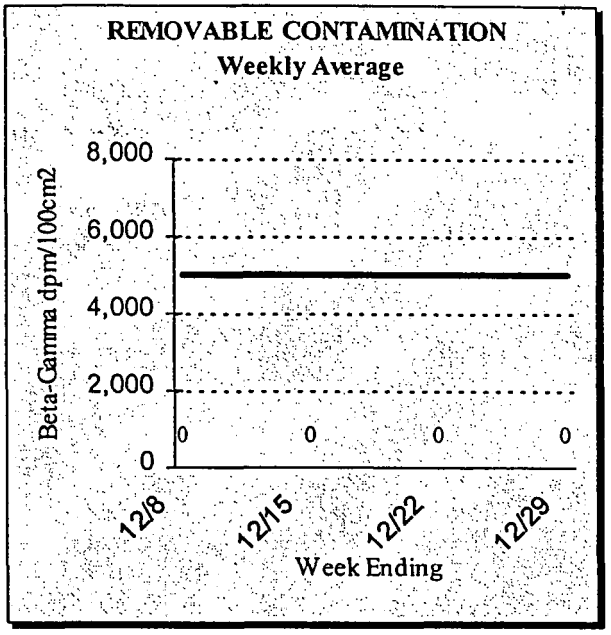
Haul road-November



Project Activities and Events
•Hauling from southern waste units complete middle of November. •Load out from soil piles 1 and 4 •Haul road down posted from southern waste units to soil pile -7 .due to completion of south field excavation.

Engineering and Administrative Controls
•Water application for dust control; •Controlled loading of equipment to prevent the spread of contamination •Contamination action levels are 1,000 dpm/100cm2 loose surface.

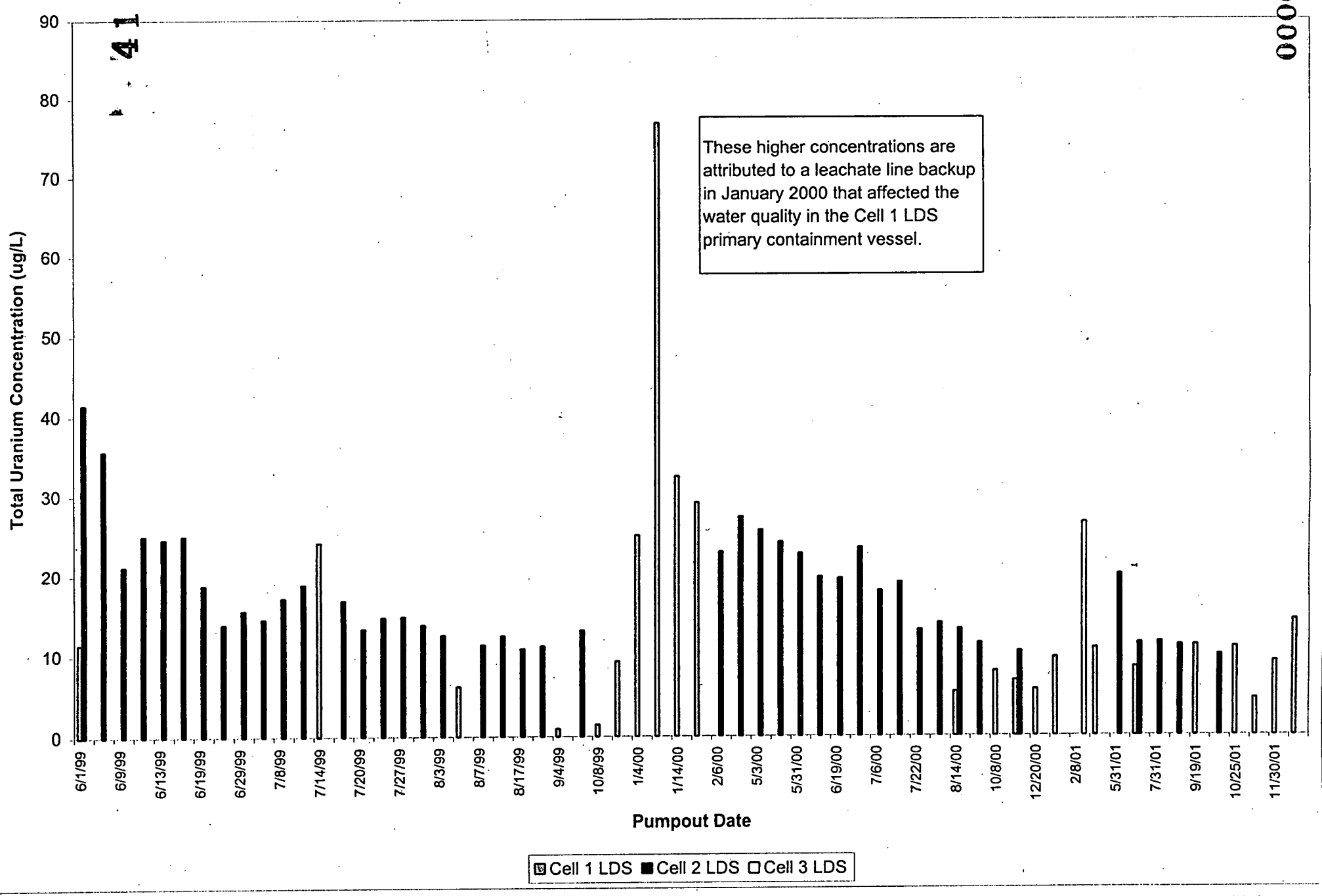
Haul road-December



Project Activities and Events
•Haul Road is a posted contamination area from soil pile -7 to the OSDF. •Haul road down posted from southern waste units to soil pile -7 .due to completion of south field excavation.

Engineering and Administrative Controls
•Water application for dust control; •Controlled loading of equipment to prevent the spread of contamination •Contamination action levels are 1,000 dpm/100cm2 loose surface.

TOTAL URANIUM CONCENTRATION IN LDS PUMPOUTS



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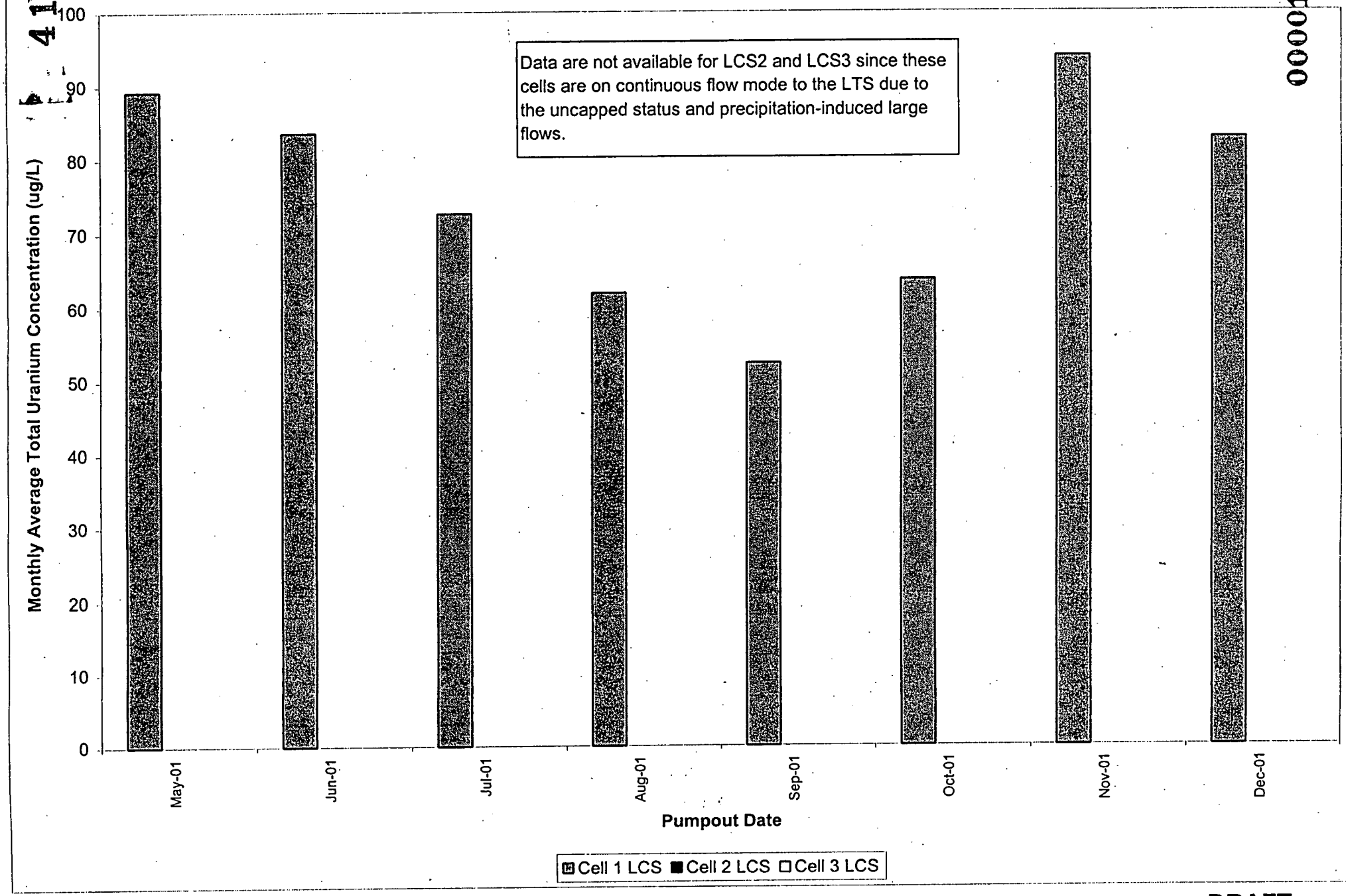
toJD LDSLCSgrph.xls Chart LDS Pumpout U (2) 01/28/2002 3:55 PM

MONTHLY AVERAGE TOTAL URANIUM CONCENTRATION IN LCS PUMPOUTS



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toJD LDSLCSgrph.xls Chart LCS Pumpout U (2) 01/28/2002 3:55 PM

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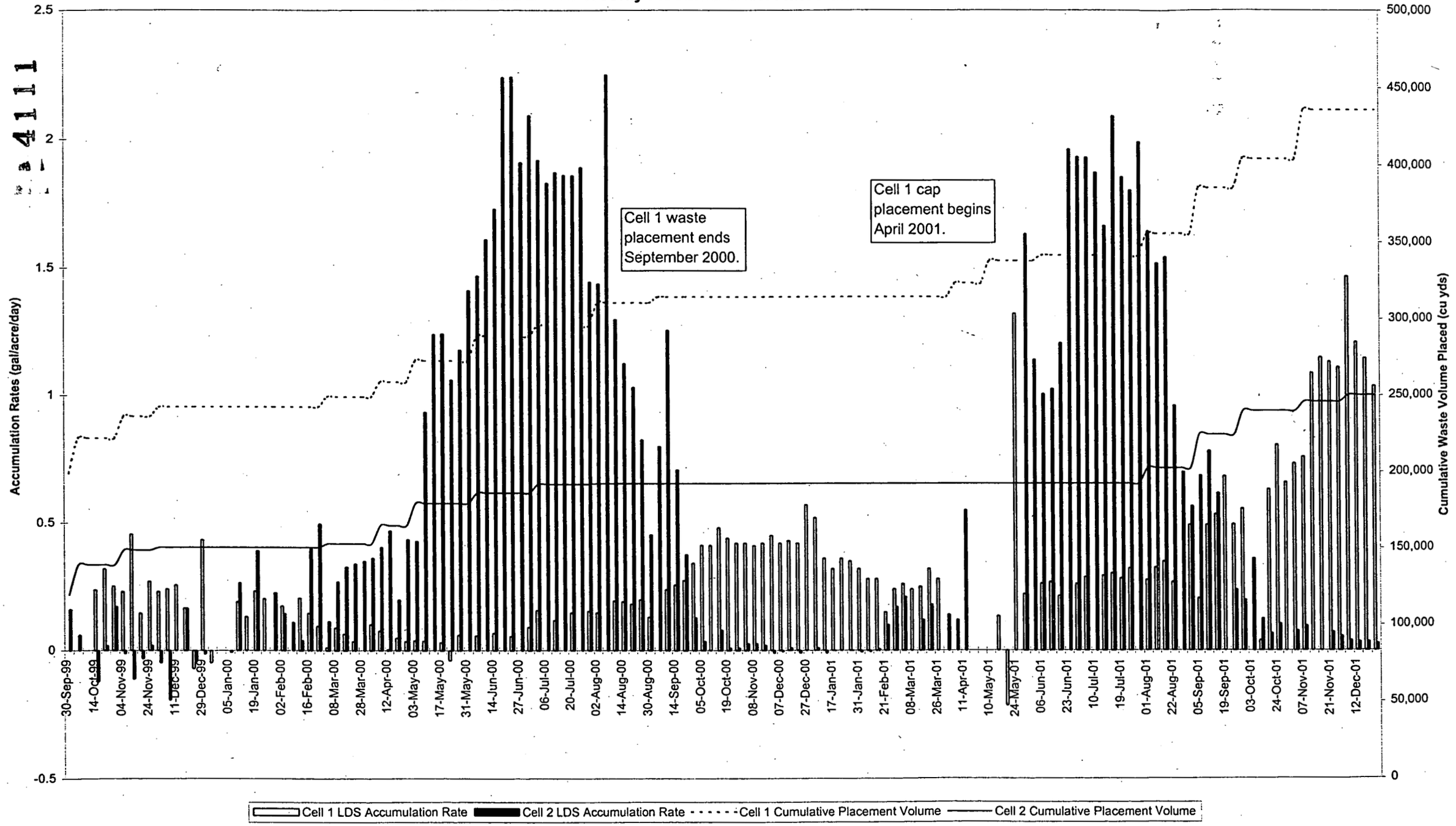
OSDF Cell 1 and 2 LDS Weekly Accumulation Rates and Cumulative Waste Placed



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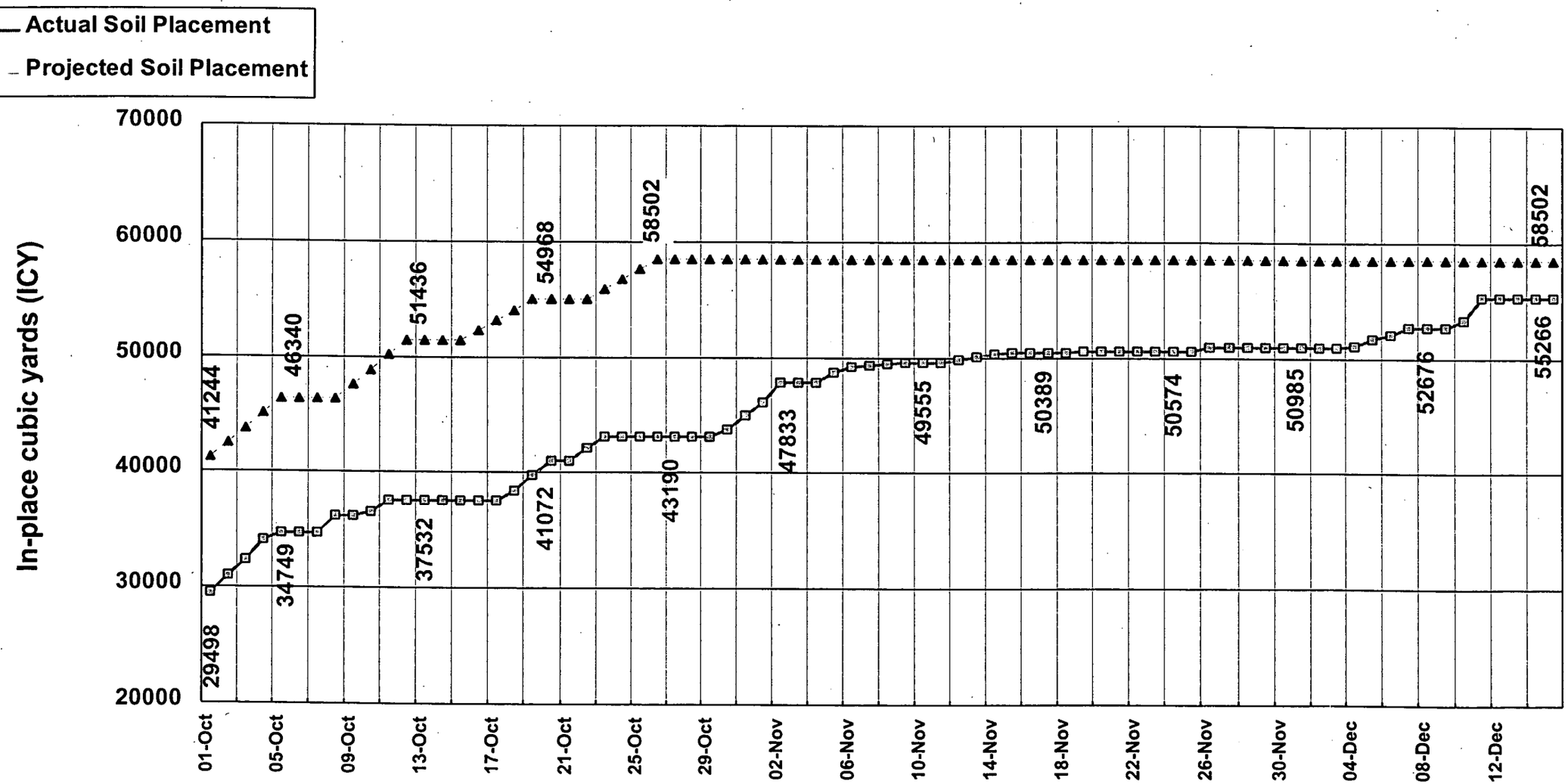
CAT 1 Soil Placement



October - November - December

Debris Placement

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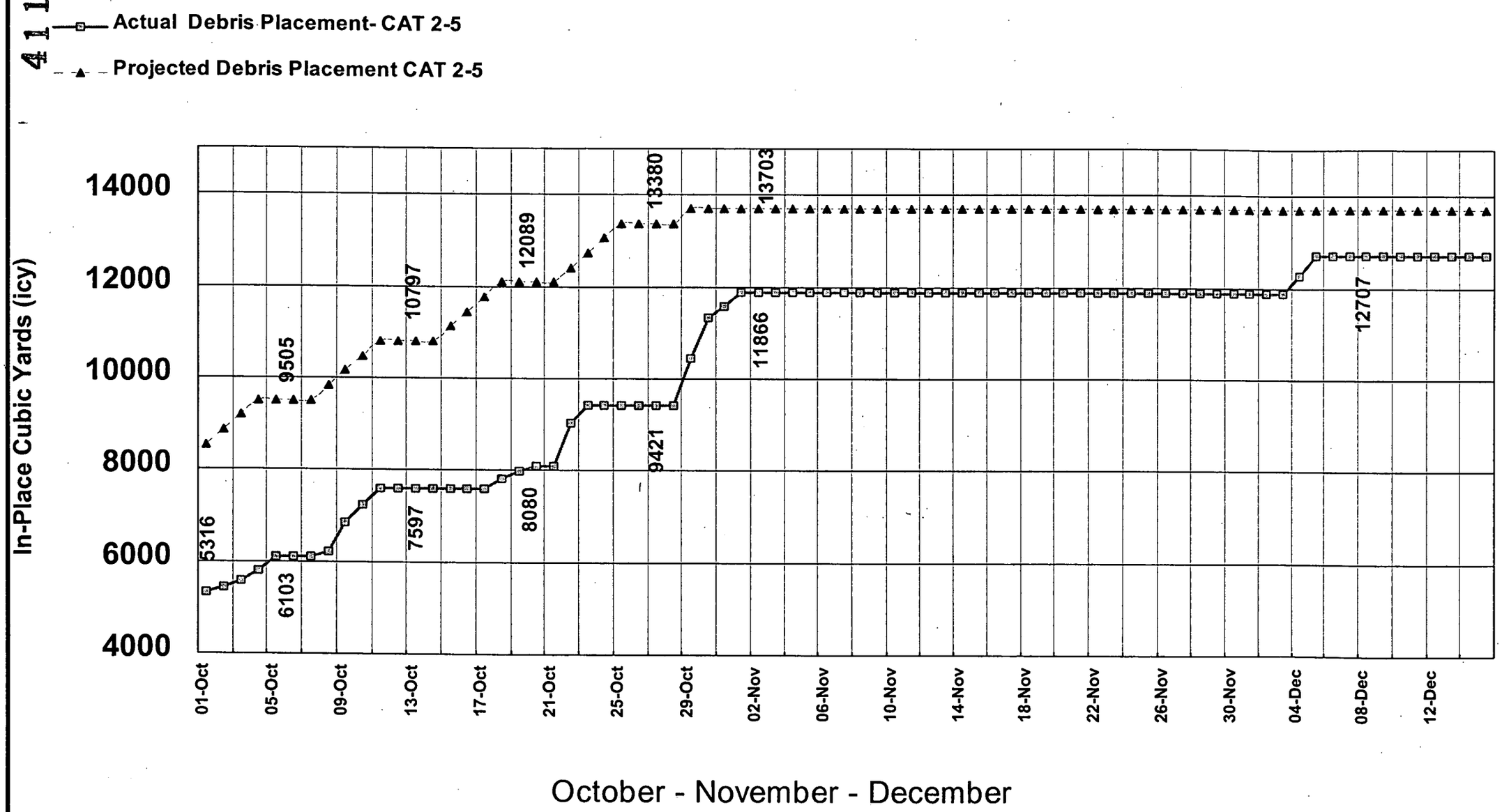

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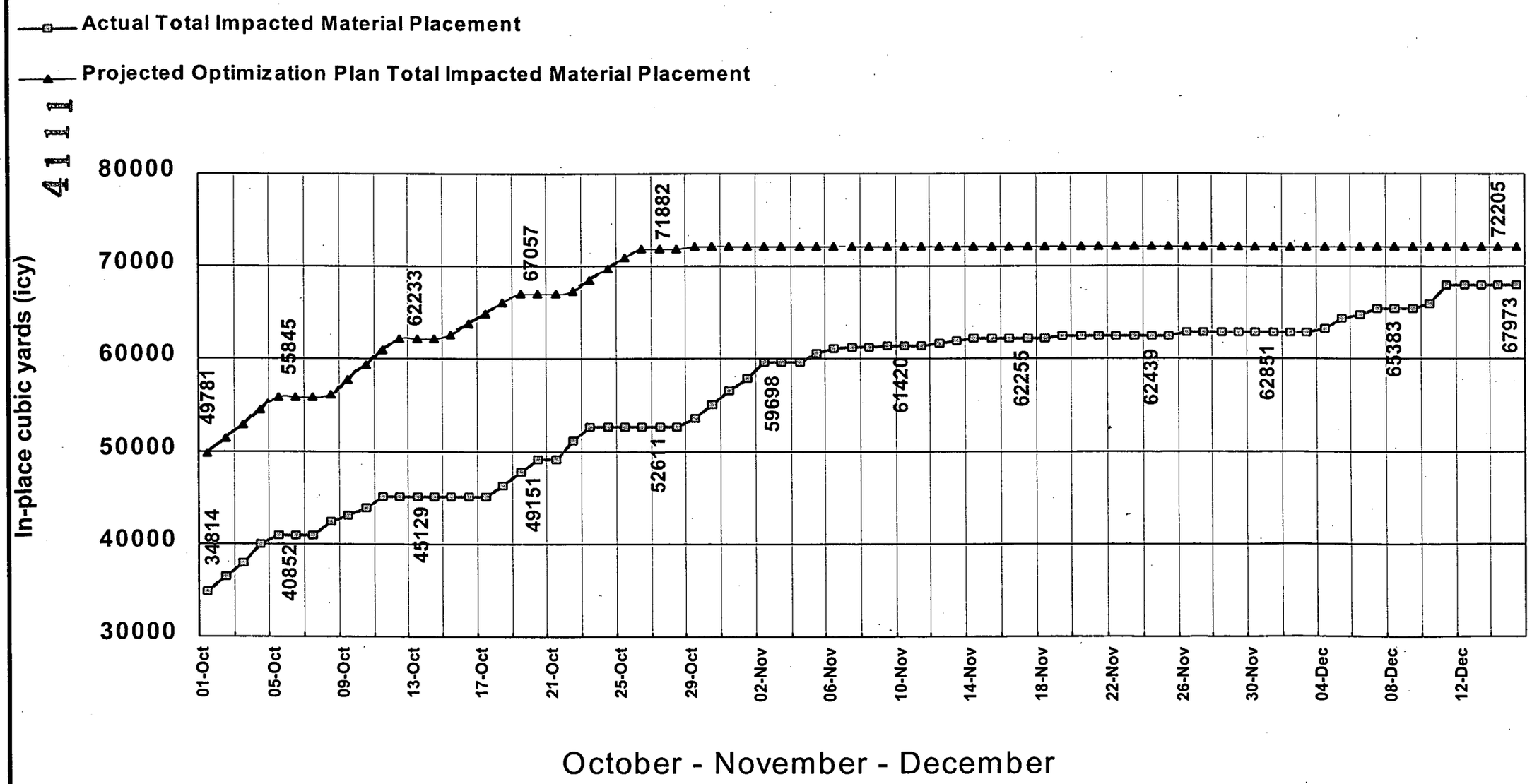
Total Soil and Debris Placement (icy)



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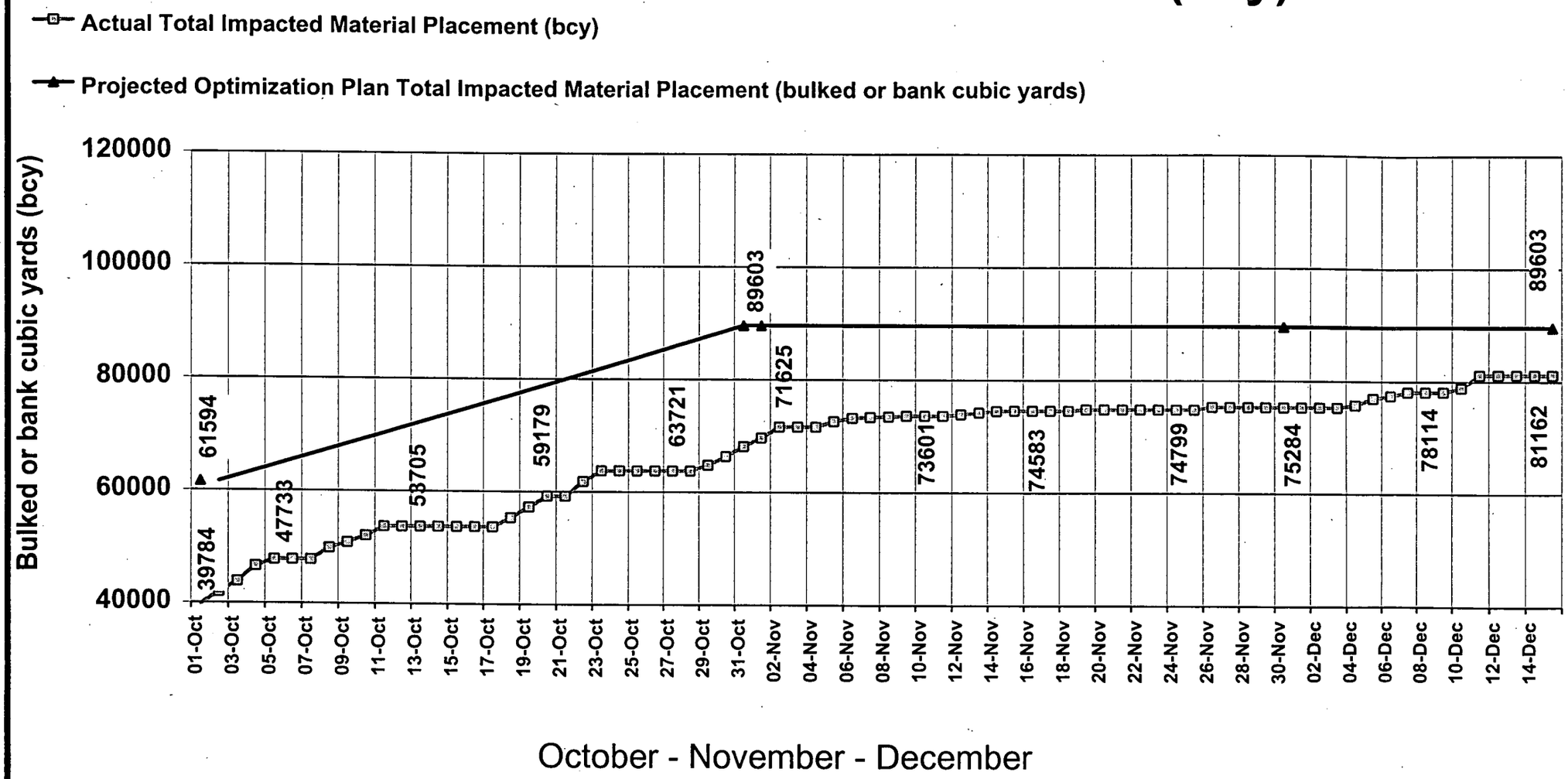
Total Soil and Debris Placement (bcy)



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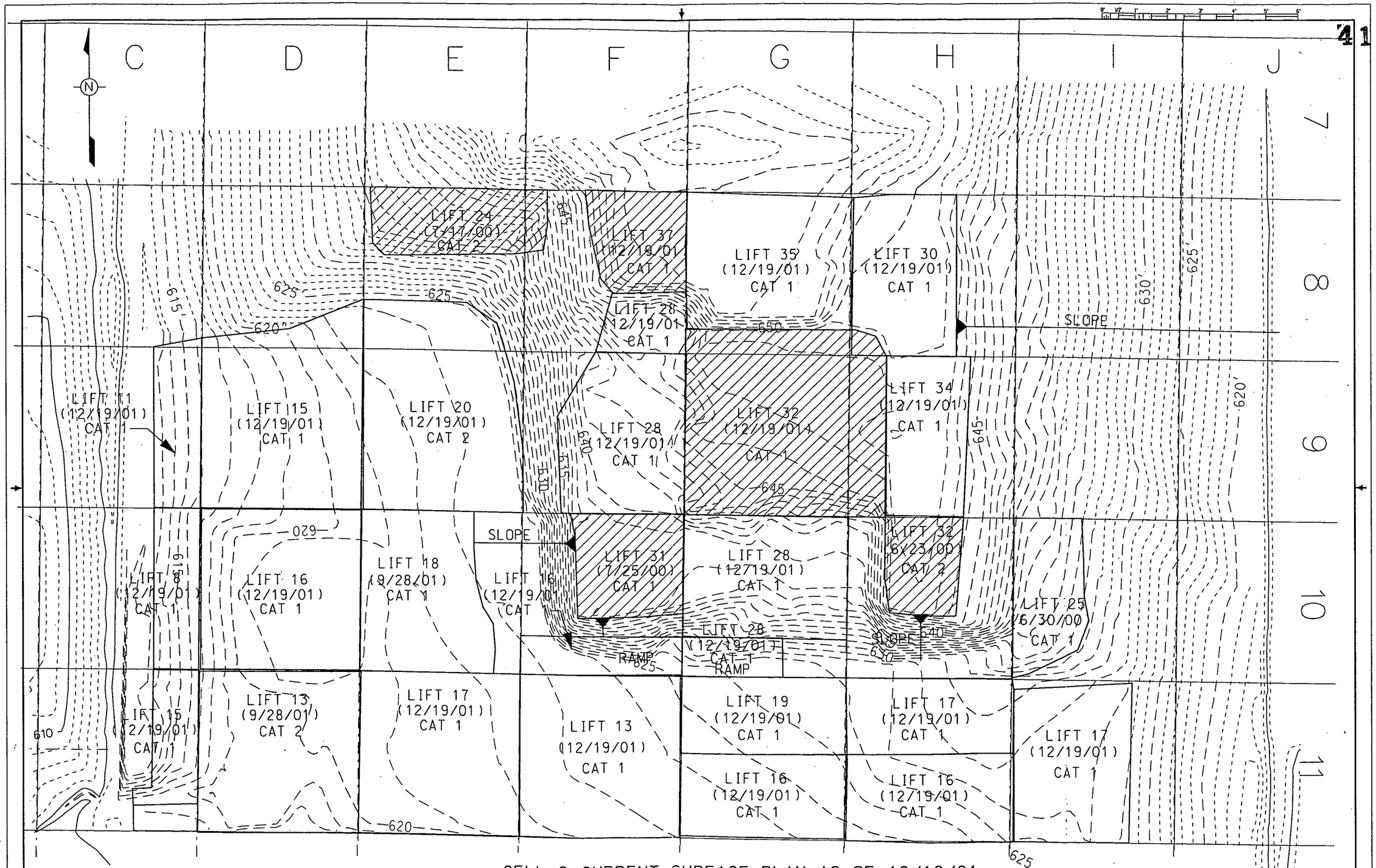
total bcy optimized Chart 1

01/03/2002



CELL 2 CURRENT SURFACE PLAN AS OF 12/19/01

LEGEND:

SURVEYED AREAS

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.

NOTE: FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING

SYSTEMS, STRUCTURES OR COMPONENTS CONSISTENT ON THIS DRAWING ARE UNDER CONFIGURATION MANAGEMENT CONTROL. SEE NOTES.

COGNIZANT ENGINEER DATE

APPROVALS

CIVIL & STR.		SAFETY ENG.	
ELECTRICAL		MAINTENANCE	
ENGINEER		FIRE PROTECT	
INSTRUMENT		WASTE MANAGE	
MECHANICAL		SECURITY	
		PROJECTS	
CHECKED			
APPROVED			

Fernald Environmental Management Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

CELL 2
TOP LIFT PLAN
CATEGORY PLACEMENT

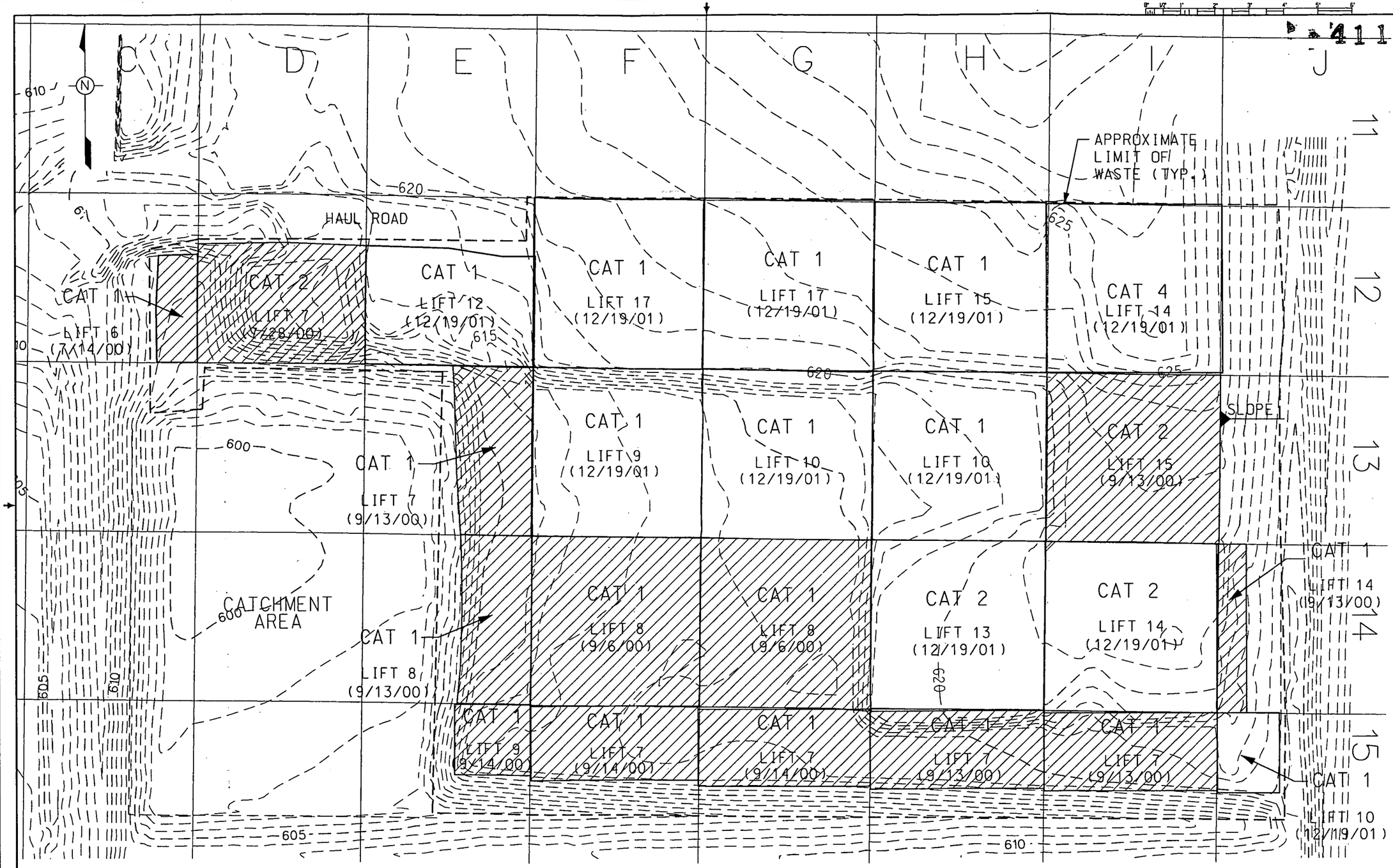
DATE 12/19/01
DRAWN WJO

FILE NAME: 2NOV01.dgn

FFS.DGN 3/22/00

07-JAN-2002 11:22

000022



CELL 3 CURRENT SURFACE PLAN AS OF (12/19/01)

000023

LEGEND:

SURVEYED AREAS

NO.	REVISIONS	DATE	DWN. BY	APPD.	NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.

NOTE: FLUOR FERNALD CADD DRAWING, DO NOT REVISE MANUALLY.

CONFIGURATION MANAGEMENT DRAWING

APPROVALS: CIVIL & STR., ELECTRICAL, ENGINEER, INSTRUMENT, MECHANICAL, CHECKED, APPROVED, SAFETY ENG., MAINTENANCE, FIRE PROTECT, WASTE MANAGE, SECURITY, PROJECTS

Fernald Environmental Management Project

FLUOR FERNALD, INC.

U.S. DEPARTMENT OF ENERGY

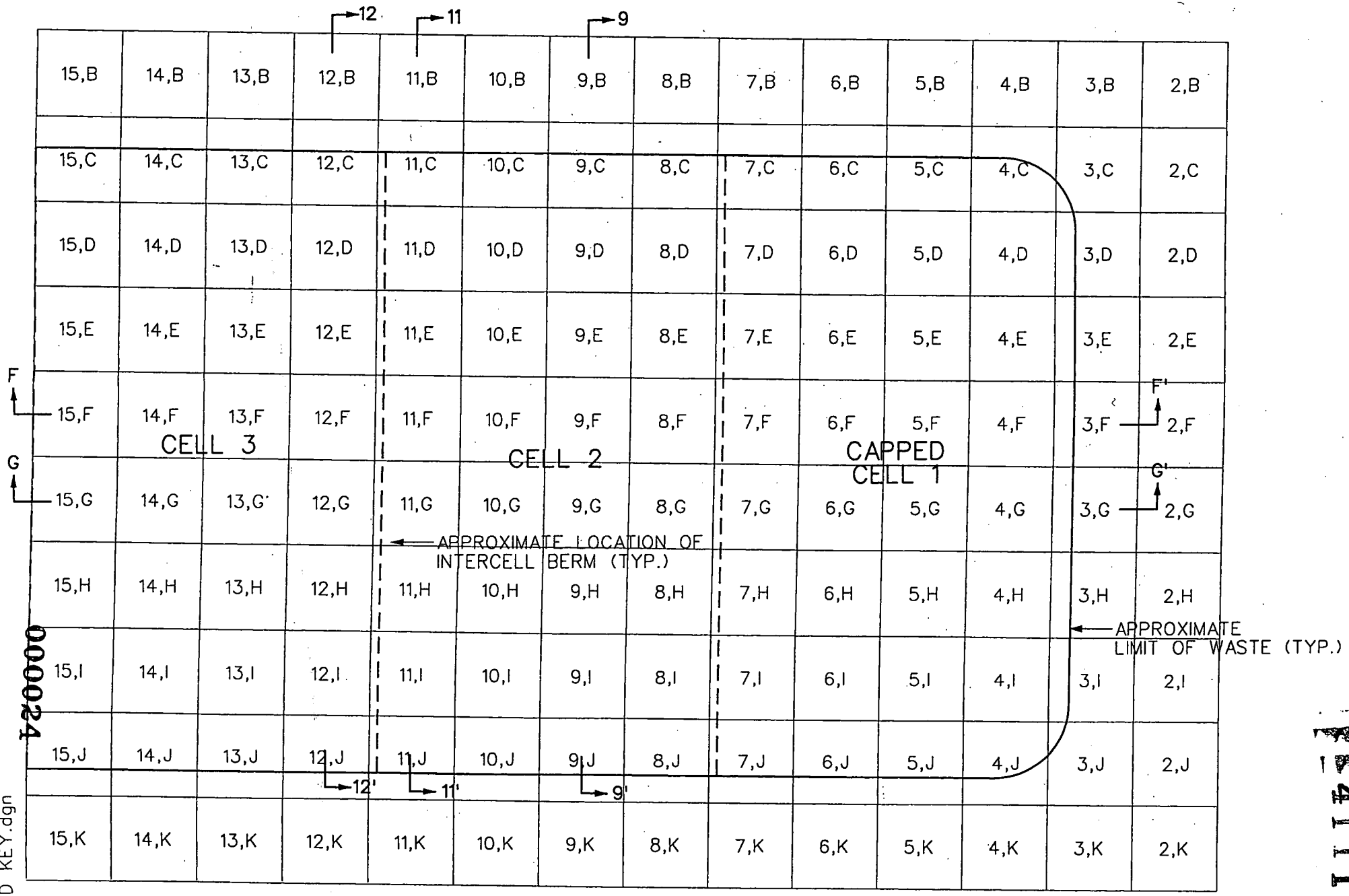
CELL 3
TOP LIFT PLAN
CATEGORY PLACEMENT

DATE 12/19/01
DRAWN WJO

FILE NAME: 3NOV01.dgn

20-DEC-2001 14:45

OSDF GRID KEY PLAN

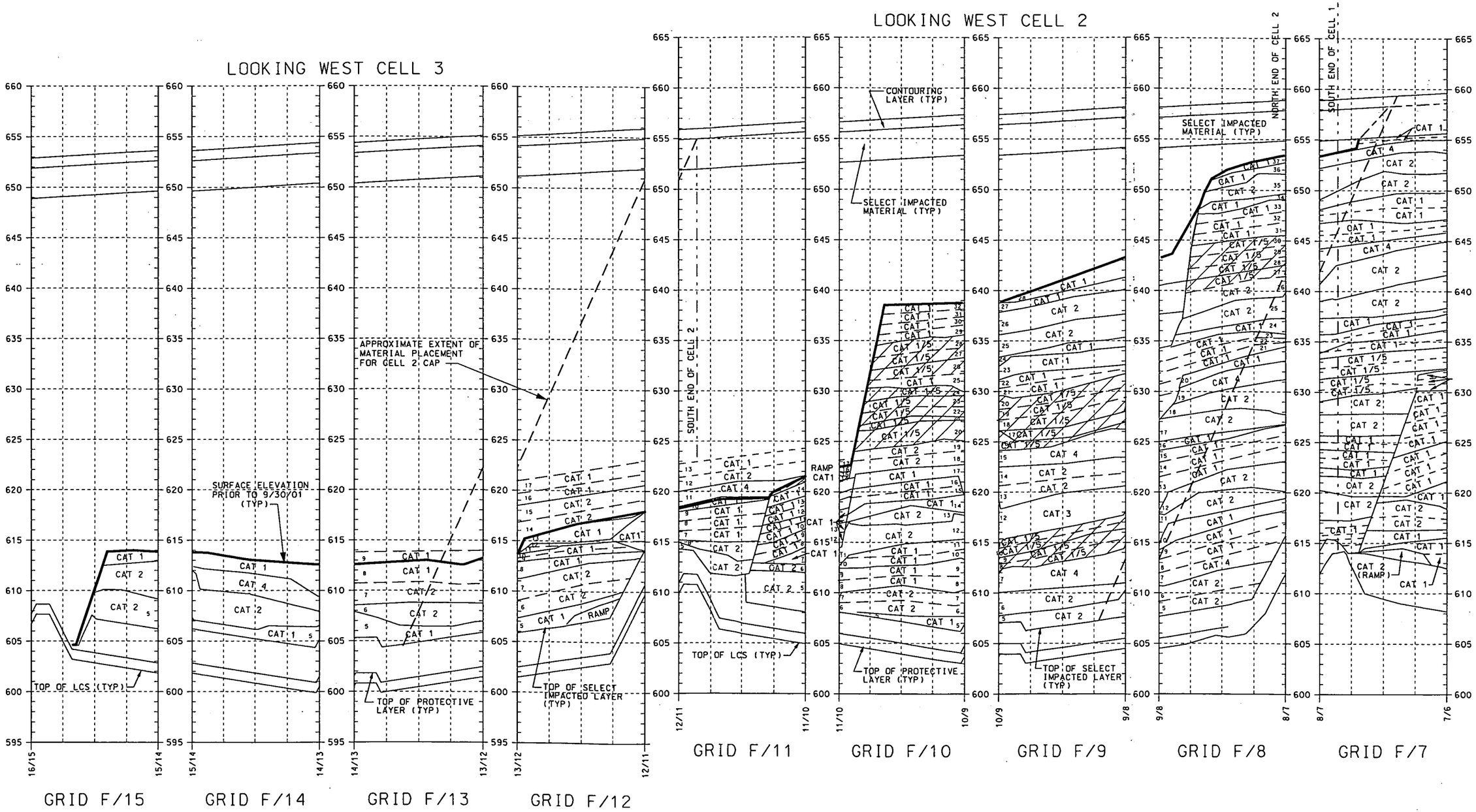


GRID KEY.dgn

000024

4111

GRID KEY.dgn

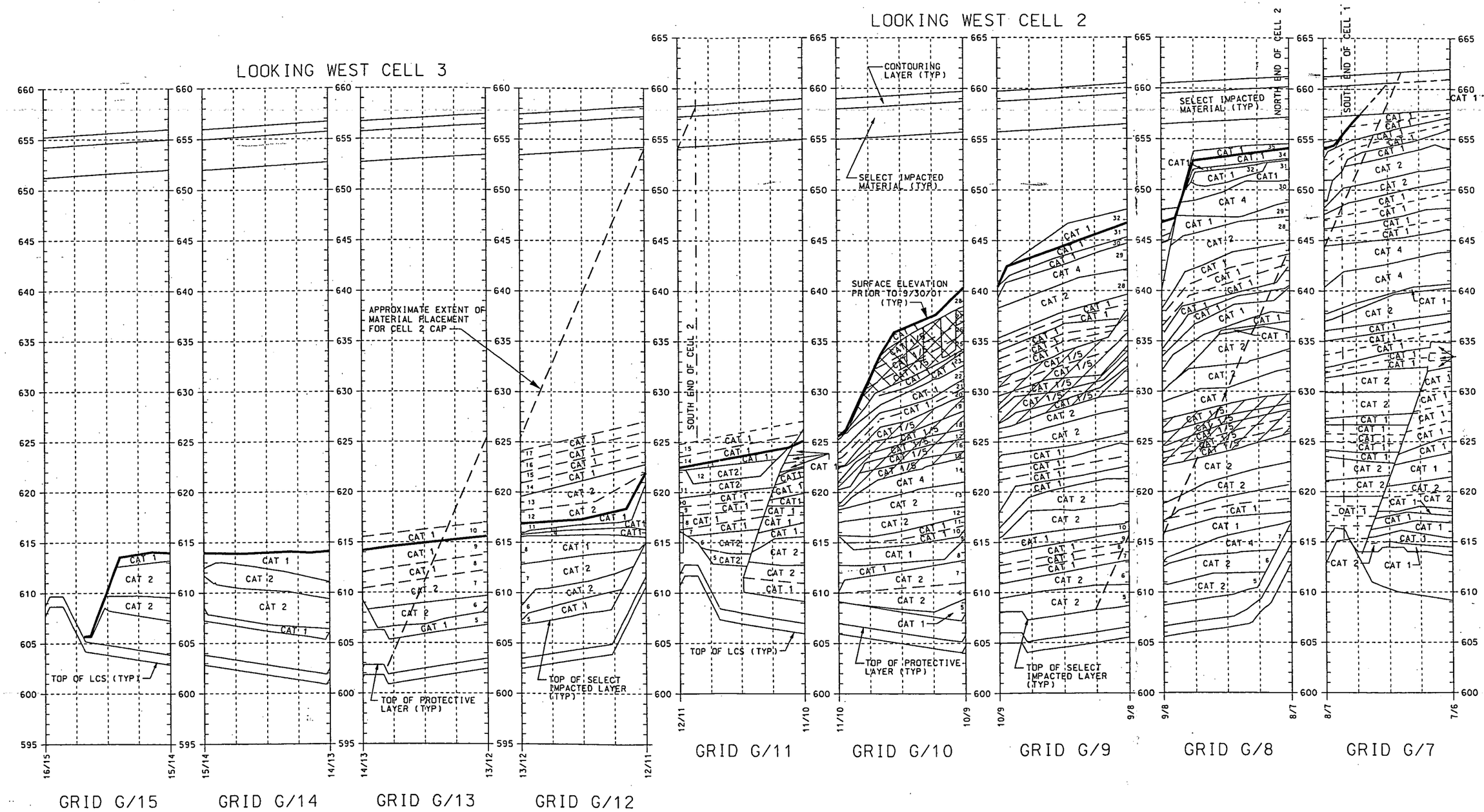


SECTION F-F'

REVISED 12/18/01 (12/04/01 SURVEY)

Dec_sect01.dgn

07-JAN-2002 11:13



SECTION G-G'

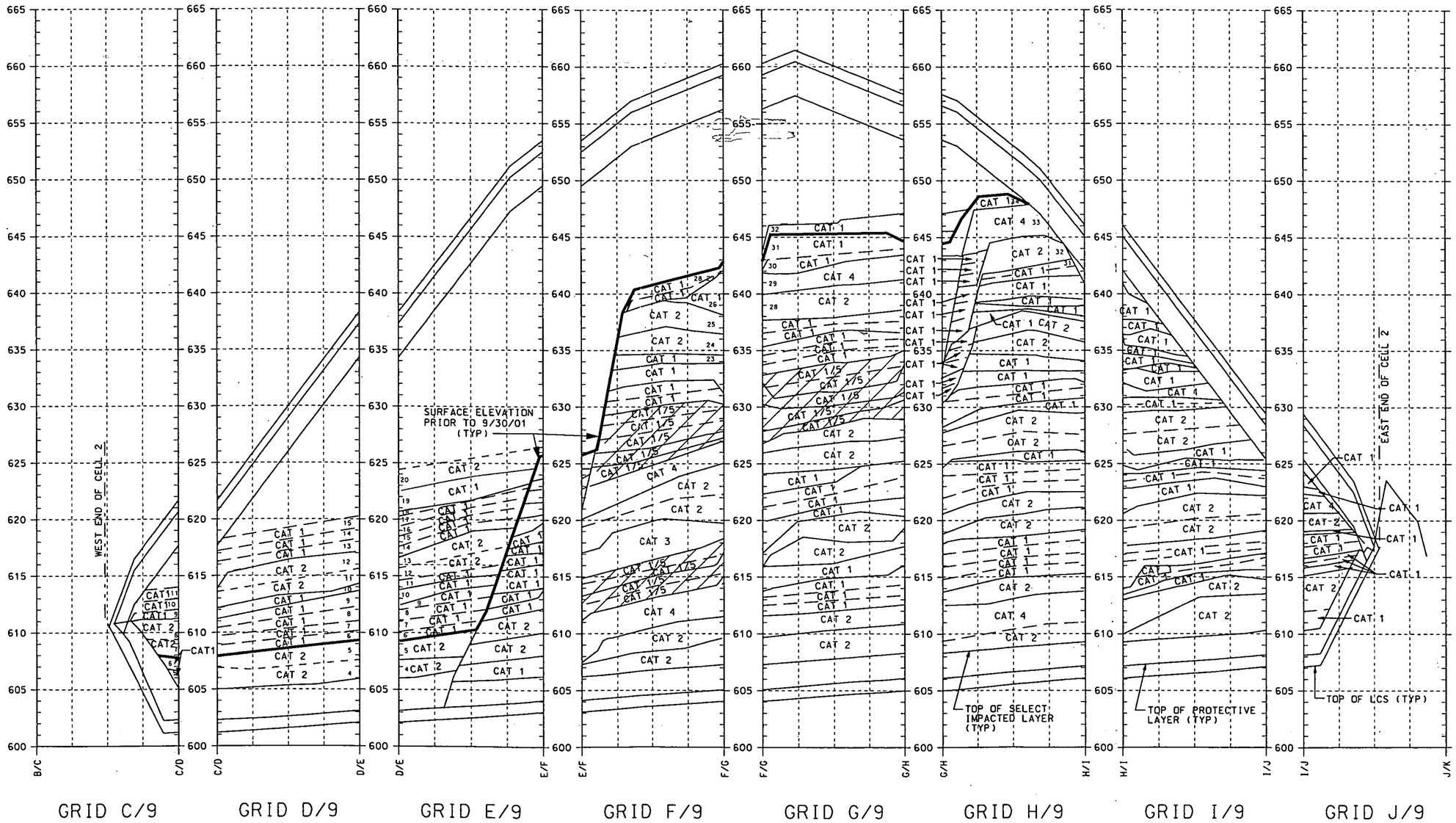
REVISED 12/18/01 (12/04/01 SURVEY)

G

Dec_sect01.dgn

07-JAN-2002 10:58

LOOKING NORTH CELL 2

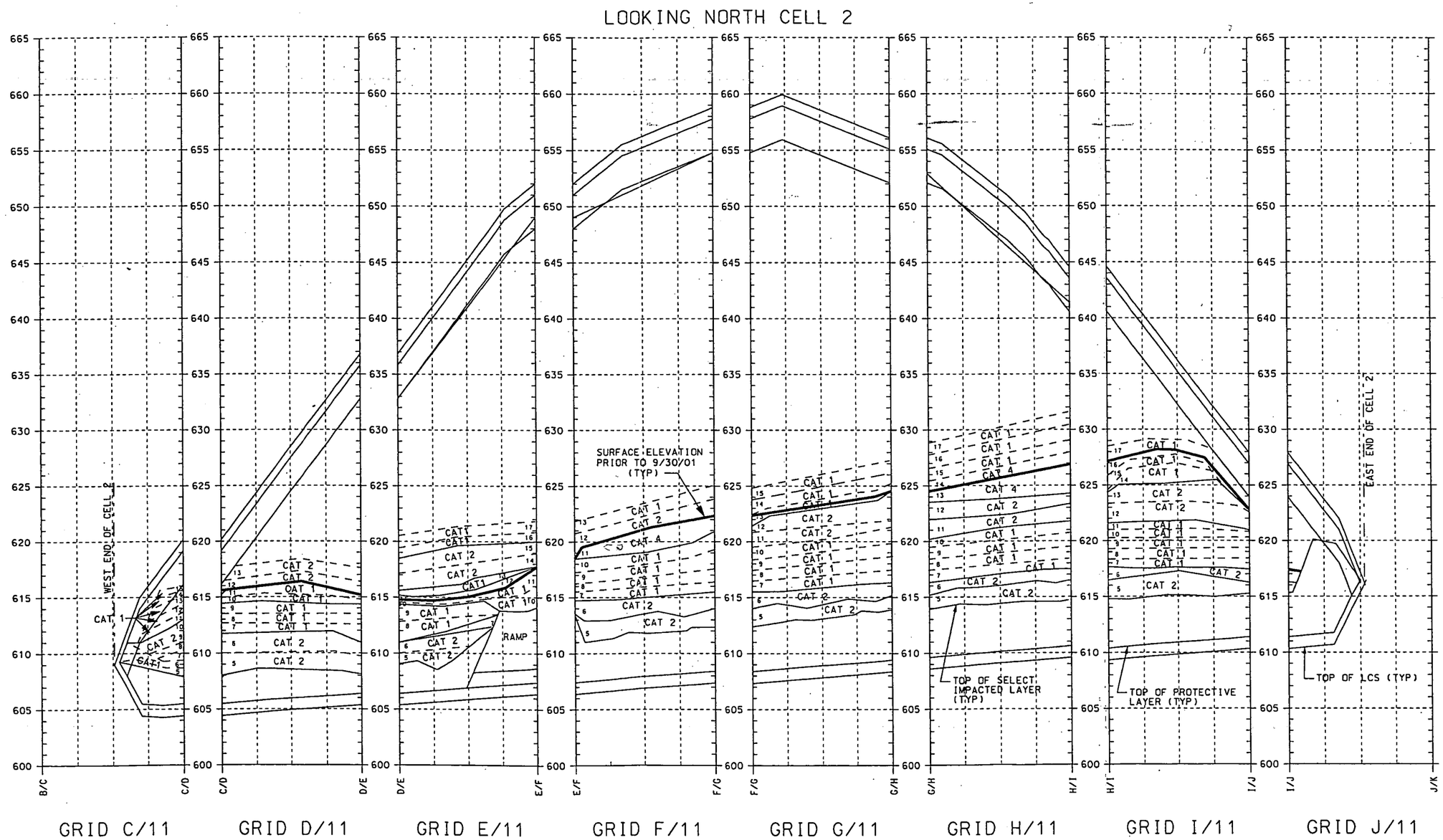


SECTION 9-9'

REVISED 12/18/01 (12/04/01 SURVEY)

Dec_sect01.dgn

07-JAN-2002 10:54



SECTION 11-11'

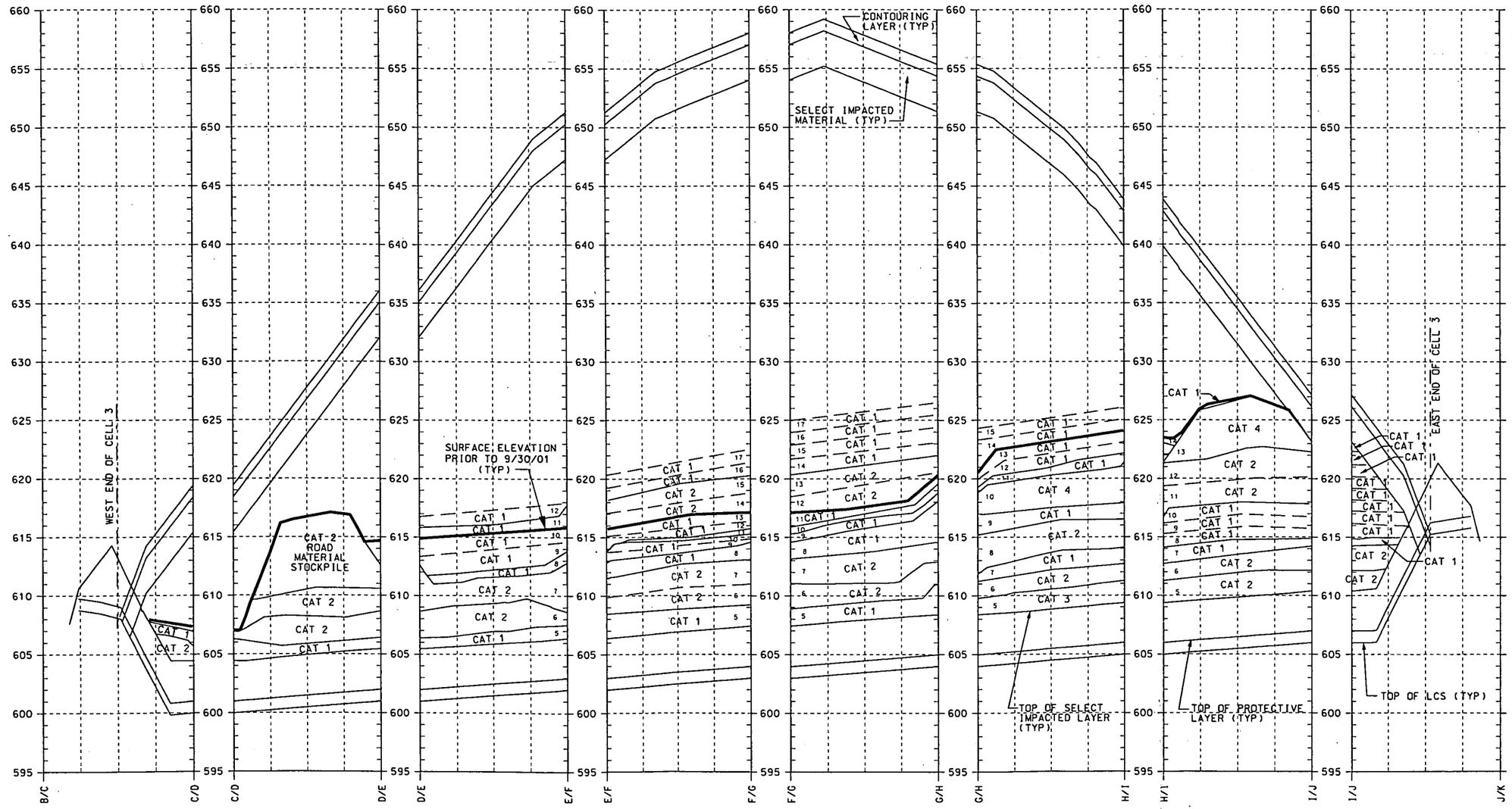
REVISED 12/18/01 (12/04/01 SURVEY)

000028

Dec_sect01.dgn

07-JAN-2002 10:57

LOOKING NORTH CELL 3



SECTION 12-12'

REVISED 12/18/01 (12/04/01 SURVEY)

000029

Dec_sect01.dgn

07-JAN-2002 11:12