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Periodic Monitoring Report for Vapor-Sampling Activities at Material Disposal Area H, Solid Waste Management Unit 54-004, at Technical Area 54, Fiscal Year 2007

Los Alamos
NATIONAL LABORATORY
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Prepared by the Environmental Programs Directorate

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EXECUTIVE SUMMARY

This periodic monitoring report summarizes the field-screening and sampling activities conducted at Material Disposal Area (MDA) H, Solid Waste Management Unit 54-004, during fiscal year (FY) 2007. MDA H is located in Technical Area 54 at Los Alamos National Laboratory (LANL or the Laboratory). The objective of the monitoring is to evaluate trends in volatile organic compound (VOC) and tritium concentrations in subsurface vapor at MDA H over time.

During FY2007, monitoring was performed in accordance with the 2004 sampling plan. During each round of quarterly sampling, subsurface vapor samples are collected from three depths in borehole 54-15461 and six depths in boreholes 54-15462 and 54-01023. All vapor samples are collected in SUMMA canisters for laboratory analysis of VOCs and in silica gel cartridges for laboratory analysis of tritium. Additionally, field screening for VOCs, carbon dioxide, and oxygen is conducted at each depth interval isolated for analytical sampling. Boreholes were instrumented with sampling membranes before third quarter FY2006 sampling. Moisture monitoring was conducted during the second and third quarters of FY2007.

Validated analytical results confirm the presence of VOCs at low concentrations and tritium in all vapor samples. This finding is consistent with the results of the 2001 Resource Conservation and Recovery Act facility investigation. The moisture content levels measured in the boreholes during the second and third quarters of FY2007 are consistent with moisture content levels measured earlier. Concentrations of all organic chemicals are below screening values for protection of groundwater. These results show no threat to groundwater from VOCs but do indicate a need for continued monitoring of pore gas, although at a reduced frequency.

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1.0 INTRODUCTION

This report discusses quarterly subsurface pore-gas field-screening and sampling activities at Los Alamos National Laboratory (LANL or the Laboratory), Material Disposal Area (MDA) H, Solid Waste Management Unit (SWMU) 54-004, at Technical Area (TA) 54. MDA H is located in the east-central portion of the Laboratory at TA-54 on Mesita del Buey (Figure 1.0-1). MDA H is a 70 ft by 200 ft (0.3-acre) fenced area consisting of nine inactive vertical disposal shafts, arranged in line approximately 15 ft within and parallel to its southern fence line. Each shaft is cylindrical, 6 ft in diameter, and 60 ft deep. The shafts are filled with solid-form waste to a depth of 6 ft below the ground surface (bgs). The wastes in Shafts 1 through 8 are covered by a 3-ft layer of concrete placed over 3 ft of crushed tuff; the waste in Shaft 9 is covered by 6 ft of concrete. The regional aquifer is estimated to be at an average depth of approximately 1040 ft bgs at MDA H, based on data from nearby wells and predictions of the hydrogeologic conceptual model for the Pajarito Plateau (LANL 1998, 059599). MDA H is relatively flat.

From May 1960 to August 1986, MDA H functioned as the Laboratory's primary disposal area for classified, solid-form waste. Between periods of waste disposal, each shaft was covered with a steel plate that was padlocked to prevent unauthorized access to classified materials. Much of the classified waste was nonhazardous; however, various hazardous chemicals, radionuclide-contaminated materials, and materials contaminated by high explosives were also disposed of at MDA H. These materials included scraps and shapes contaminated with depleted uranium, drummed radioactive waste, fuel elements, a classified unit contaminated with tritium, plutonium-contaminated shapes, and decontamination and decommissioning scrap.

Pore-gas monitoring at MDA H has been required since the second quarter fiscal year (FY) 2005; a summary of this monitoring follows.

- On April 11, 2003, the New Mexico Environment Department (NMED) approved the Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) report for MDA H (LANL 2001, 070158), and addendum to the report (LANL 2002, 073270), and a letter (NMED 2003, 075939).
- In May 2003, the Laboratory submitted the corrective measure study report for MDA H, (LANL 2003, 076039) identifying a preferred remedy; comments were received from NMED, and the report was reissued in June 2005 (LANL 2005, 089332).
- In December 2004, NMED sent a letter (NMED 2004, 092217) requesting that the Laboratory collect quarterly subsurface vapor-monitoring samples from boreholes 54-15461, 54-15462, and 54-01023 to provide data to facilitate NMED's selection of an appropriate remedy for MDA H.
- In May 2005, NMED sent a letter (NMED 2005, 092219) requesting that the Laboratory continue to collect quarterly subsurface vapor monitoring samples from boreholes 54-15461, 54-15462, and 54-01023.
- In February 2005 (second quarter FY2005), the Laboratory began quarterly pore-gas monitoring using the Packer sampling system. In March 2006, before third quarter FY2006 sampling began, the Laboratory installed FLUTe sampling membranes into each MDA H pore-gas monitoring location (Figure 1.0-3). Through the end of September 2007, 11 quarters of samples have been collected and analyzed.

Subsurface vapor field screening and sampling are being performed by personnel from the Laboratory's Environmental Programs Directorate–Corrective Actions Program to characterize trends of volatile organic compounds (VOCs) and tritium in subsurface vapor and to monitor changes over time in moisture content at depth. Field-screening data and analytical laboratory results for FY2007 are presented in this

report. This report presents moisture monitoring data for the second and fourth quarters of FY2005; first, second, third and fourth quarters of FY2006; and second and third quarters of FY2007. Information on radioactive materials and radionuclides, including the results of sampling and analysis of radioactive constituents, is voluntarily provided to NMED in accordance with U.S. Department of Energy (DOE) policy.

2.0 SCOPE OF ACTIVITIES

During FY2007, the following sampling activities were completed at MDA H, as directed by NMED in a December 21, 2004, letter to the Laboratory (NMED 2004, 092217) and in a May 17, 2005, letter to the Laboratory (NMED 2005, 092219). The borehole locations are shown in Figure 2.0-1.

- Vapor samples for field screening and laboratory analyses were collected from the following ports:
    - ❖ Borehole 54-15461: 10 ft bgs, directly below the surface completion; 60 ft bgs, corresponding to the base of the shafts; and at total depth (TD), 95-ft bgs.
    - ❖ Borehole 54-15462: 10 ft bgs, directly below the surface completion; 60 ft bgs, corresponding to the base of the shafts; depths 100, 150, and 200 ft bgs; and the Cerro Toledo interval, 254 ft bgs.
    - ❖ Borehole 54-01023: the 10 ft bgs, directly below the surface completion; 60 ft bgs, corresponding to the base of the shafts; depths of 100, 150, and 200 ft bgs; and the Cerro Toledo interval, 247 ft bgs.
- Each depth location was purged to ensure that formation air was sampled in accordance with Standard Operating Procedure (SOP) 06.31, Rev. 2, Sampling of Subatmospheric Air.
- Pore gas from each interval was monitored for field screening of carbon dioxide and oxygen using a Landtec GEM-500.
- Vapor samples were collected from each interval in SUMMA canisters for laboratory analysis of VOCs using U.S. Environmental Protection Agency (EPA) Method TO-15.
- Vapor samples were collected from each interval using silica gel cartridges for analysis of tritium by EPA Method 114 (National Emissions Standards for Hazardous Air Pollutants [NESHAP] Part 61, Appendix B).
- During the second and third quarters of FY2007, each borehole was logged using a neutron probe to determine the downhole volumetric moisture content.

No investigation-derived waste was generated during quarterly monitoring.

3.0 REGULATORY CRITERIA

The March 1, 2005, Compliance Order on Consent (the Consent Order) does not identify any cleanup standards, risk-based screening levels, risk-based cleanup goals, or other regulatory criteria for pore gas at MDA H. Therefore, an analysis was conducted to evaluate the potential for contamination of groundwater by VOCs in pore gas using screening levels (SLs) based on groundwater cleanup levels contained in the Consent Order. The analysis evaluated the water concentration that will be in equilibrium with the maximum concentrations of VOCs detected at MDA H during the most recent round of monitoring.

$C_{water} = C_{air}$/Henry's Law constant (H') **Equation 3-1**

If the concentration of the VOC in water is less than the SL, then no potential exists for exceedances of groundwater cleanup levels. The analysis for MDA H data is presented in section 5.0.

4.0 FIELD-SCREENING RESULTS

Field-screening events were performed at MDA H on January 3, 2007 (first quarter FY2007); March 28 and 30, 2007 (second quarter FY2007); May 30, 2007 (third quarter FY2007); and July 23 to 24, 2007 (fourth quarter FY2007). Field screening at MDA H during FY2007 included field analyses of subsurface vapor for carbon dioxide and oxygen. Field screening during the second and third quarters of FY2007 included field analyses of subsurface soil/rock for volumetric percent moisture.

During the second and fourth quarters of FY2005 and the first quarter of FY2006, uninstrumented boreholes 54-01023, 54-15461, and 54-15462 were logged using a Mount Sopris MSLog data logger with a CPN 503DR neutron probe to determine the volumetric percent moisture from TD to ground surface. Before third quarter FY2006 monitoring activities began, each MDA H borehole was instrumented with FLUTe sampling membranes and logging was conducted using a Mount Sopris Matrix data logger with the same CPN 503DR neutron probe. During FY2007, instrumented boreholes 54-01023, 54-15461, and 54-15462 were logged to determine the volumetric percent moisture from TD to ground surface. Neutron-activation moisture results generated for boreholes 54-01023, 54-15462, and 54-15461 collected during FY2007 and a discussion of neutron-log calibration are presented in Appendix C. After application of Lowess smoothing, volumetric moisture data from each of the four quarters are compared in graphs shown in Figure 4.0-1.

The moisture content in boreholes 54-01023, 54-15461, and 54-15462 during the second quarter of FY2007 ranged from 3 to 31%, 2 to 11%, and 3 to 26%, respectively. Moisture content measured during the third quarter of FY2007 was similar, ranging from 3% to 48%, 3% to 17%, and 2% to 24%, respectively. The spike in moisture in boreholes 54-01023 and 54-15462 at approximately 150 ft bgs corresponds with the high specific surface area characteristic of the vapor-phase notch that marks the boundary between unit Qbt 1v and the underlying unit Qbt 1g.

During FY2007, subsurface vapor field screening was conducted at the locations and intervals described in section 2. Each interval was first purged to ensure that formation air was being collected. During purging, the subsurface vapor was monitored for percent carbon dioxide and oxygen using a Landtec GEM-500. The stabilized values are presented in Tables 4.0-1 and 4.0-2. During FY2007, carbon dioxide ranged from 0.0% to 1.3% and oxygen from 19.3% to 20.8%.

5.0 ANALYTICAL DATA RESULTS

Subsurface vapor samples were collected at MDA H from December 21, 2006, to January 4, 2007 (first quarter FY2007); March 27 to 30, 2007 (second quarter FY2007); May 30 to June 1, 2007 (third quarter FY2007); and July 23 to 26, 2007 (fourth quarter FY2007). Samples were collected in SUMMA canisters for laboratory analysis of VOCs using EPA Method TO-15 and in silica gel cartridges for analysis of tritium using EPA Method 114 (NESHAP Part 61, Appendix B).

Tritium and VOC analytical data from these sampling events are presented in Tables 5.0-1 and 5.0-2, respectively. The quality assurance/quality control program used to review the data is presented in Appendix A. Analytical data for FY2007 are included in Appendix B (on CD).

Thirty-four different VOCs were detected in vapor samples collected from MDA H during FY2007 sampling events. Dichlorodifluoromethane and 1,1,1-trichloroethane were the most frequently detected analytes and were detected in each of the 60 samples collected during FY2007. Trichlorofluoromethane was detected in 59 of 60 samples collected, and 1,1,2-trichloro-1,2,2-trifluoroethane was detected in 47 of 60 samples collected. The VOC 2-propanol, detected in 15 of 60 samples, was detected at the highest concentration, reaching a maximum of 230 µg/m^3 in borehole 54-01023 at the 150-152-ft interval during the third quarter FY2007. VOC results are generally stable over the four FY2007 sampling events. Reported results do not show consistent increasing or decreasing trends over time and do not show strong increasing or decreasing trends with depth.

The maximum tritium concentrations were consistently detected in samples collected from borehole 54-01023, the location nearest MDA H, indicating a tritium source at MDA H. During FY2007 sampling, tritium concentrations in moisture extracted from this borehole ranged from a concentration of 9,230,000 pCi/L at the 10–12-ft interval to 392,000 pCi/L at 247–249-ft interval. Fiscal year 2007 results for tritium concentrations in boreholes 54-15461 and 54-15462 ranged from nondetect at 112 pCi/L to detected at 127,000 pCi/L. Tritium concentrations are greatest near the disposal shafts, decrease with distance from MDA H, and are representative of a diffusive plume.

The VOC results from the most recent round of sampling were screened to evaluate whether the concentrations of VOCs in the plume may be of concern as a potential source of groundwater contamination. Because no SLs are available for pore gas that address the potential for groundwater contamination, the screening evaluation was based on groundwater cleanup levels contained in the Consent Order and Henry's Law constants that describe the equilibrium relationship between vapor and water concentrations. The source of the Henry's Law constants was the NMED soil screening level technical background document (NMED 2006, 092513). The following dimensionless form of Henry's Law constant was used:

$$H' = \frac{C_{air}}{C_{water}} \qquad \textbf{Equation 5-1}$$

where C_{air} is the volumetric concentration of contaminant in air and C_{water} is the volumetric concentration of contaminant in water. Equation 5-1 can be used to calculate the following screening value (SV):

$$SV = \frac{C_{air}}{1000 \times H' \times SL} \qquad \textbf{Equation 5-2}$$

where C_{air} is the concentration of VOC in the pore-gas sample (µg/m^3), H' is the dimensionless Henry's Law constant, SL is the screening level (µg/L), and 1000 is a conversion factor from L to m^3. The SLs are the groundwater cleanup levels specified in the Consent Order, which are the EPA maximum contaminant level (MCL) or New Mexico Water Quality Control Commission (NMWQCC) groundwater standard, whichever is lower. As specified in the Consent Order, if no MCL or WQCC standard exists, the EPA Region 6 human health medium-specific screening level for tap water is used. The numerator in Equation 5-2 is the actual concentration of VOC in pore gas, and the denominator represents the concentration in pore gas needed to exceed the SL. Therefore, if the SV is less than one, the concentration of VOC in pore gas would not be sufficiently high to cause the water SL to be exceeded, even if the VOC plume were in contact with groundwater.

Equation 5-2 was used to screen the maximum concentrations of VOCs detected in pore-gas samples at MDA H during FY2007 sampling. The evaluation considered the 33 VOCs detected in MDA H samples. As shown in Table 5.0-3, all maximum concentrations resulted in SVs below 1.0; the maximum SV was 0.11.

6.0 SUMMARY

The purpose of the quarterly field-screening and sampling activities at MDA H is to provide NMED with data to facilitate a selection of an appropriate remedy for MDA H. The results from the four quarters of monitoring events in FY2007 activities can be summarized as follows.

- Field screening and sampling were conducted during the first, second, third, and fourth quarters of FY2007, as specified in the December 21, 2004, letter NMED sent to the Laboratory (NMED 2004, 092217).
- VOCs continue to be present at low concentrations in subsurface vapor.
- VOCs are detected at concentrations consistent with the results from the last two quarters of FY2006.
- Tritium is present in subsurface vapor at concentrations representative of those detected during first quarter FY2006 vapor-sampling activities.
- Tritium activities for the four quarters of data at each sample interval range within 1 order of magnitude.
- Concentrations of VOCs in pore gas collected using instrumented membrane sampling are all below the SVs.
- Tritium activities from borehole 54-01023 are 2 to 3 orders of magnitude greater than activities from boreholes 54-15461 and 54-15462 at similar depths.

Moisture, tritium, and VOC concentrations determined from current analyses are consistent with the results of earlier site characterization activities. New releases or unexpected decreases of VOCs and tritium are not evident in the monitoring data. Monitoring activities at MDA H indicate that the bases of the results and conclusions made in the MDA H CMS (LANL 2005, 089332) have not changed and are consistent with current conditions. During FY2007 and the last two quarters of FY2006, no VOCs have been detected at concentrations high enough to partition into groundwater and theoretically result in aqueous concentrations greater than groundwater cleanup standards. It is recommended that the data from the next two quarterly monitoring periods be evaluated to see if the VOC concentrations remain at the same levels. If so, the Laboratory will request a meeting with NMED to review the data and decide if the frequency of monitoring may be changed from quarterly to annually.

7.0 REFERENCES

The following list includes all documents cited in this report. Parenthetical information following each reference provides the author(s), publication date, and ER ID number. This information is also included in text citations. ER ID numbers are assigned by the Environmental Programs Directorate's Records Processing Facility (RPF) and are used to locate the document at the RPF and, where applicable, in the master reference set.

Copies of the master reference set are maintained at the NMED Hazardous Waste Bureau; the U.S. Department of Energy–Los Alamos Site Office; the U.S. Environmental Protection Agency, Region 6; and the Directorate. The set was developed to ensure that the administrative authority has all material needed to review this document, and it is updated with every document submitted to the administrative authority. Documents previously submitted to the administrative authority are not included.

LANL (Los Alamos National Laboratory), May 22, 1998. "Hydrogeologic Workplan," Los Alamos National Laboratory document LA-UR-01-6511, Los Alamos, New Mexico. (LANL 1998, 059599)

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NMED (New Mexico Environment Department), April 11, 2003. "Approval of RCRA Facility Investigation Report for Material Disposal Area H," New Mexico Environment Department letter to P. Nanos (LANL Interim Director), and D. Gregory (DOE-OLASO) from J. Young (NMED), Santa Fe, New Mexico. (NMED 2003, 075939)

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NMED (New Mexico Environment Department), May 17, 2005. "Notification for Additional Information for MDA H, SWMU 54-004, at TA-54," New Mexico Environment Department letter to D. Gregory (DOE LASO) and G.P. Nanos (LANL Director) from N. Dhawan (NMED-HWB), Los Alamos, New Mexico. (NMED 2005, 092219)

NMED (New Mexico Environment Department), June 2006. "Technical Background Document for Development of Soil Screening Levels, Revision 4.0, Volume 1, Tier 1: Soil Screening Guidance Technical Background Document," New Mexico Environment Department, Hazardous Waste Bureau and Ground Water Quality Bureau Voluntary Remediation Program, Santa Fe, New Mexico. (NMED 2006, 092513)

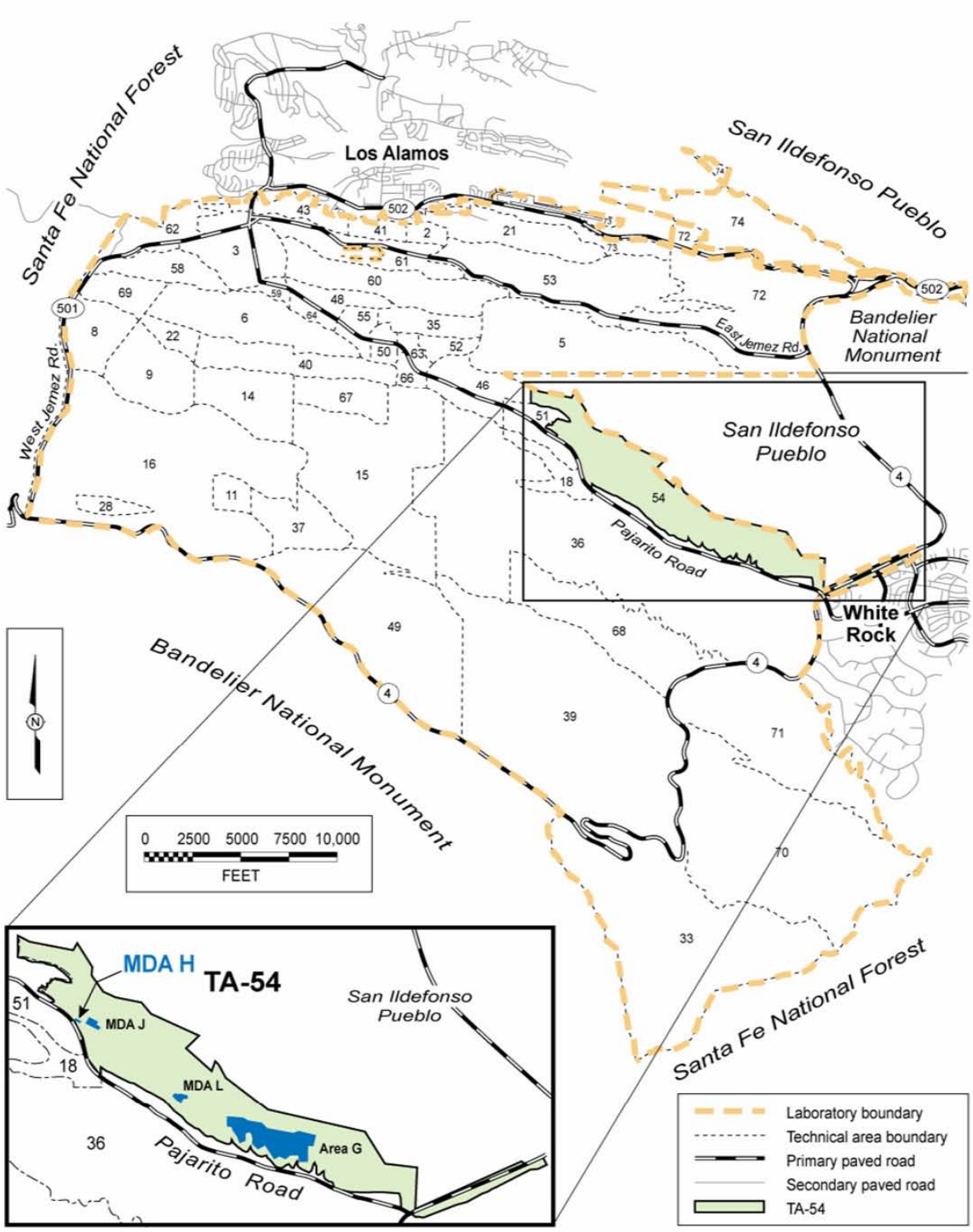

Figure 1.0-1 Location of MDA H in TA-54 with respect to Laboratory technical areas and surrounding land holdings

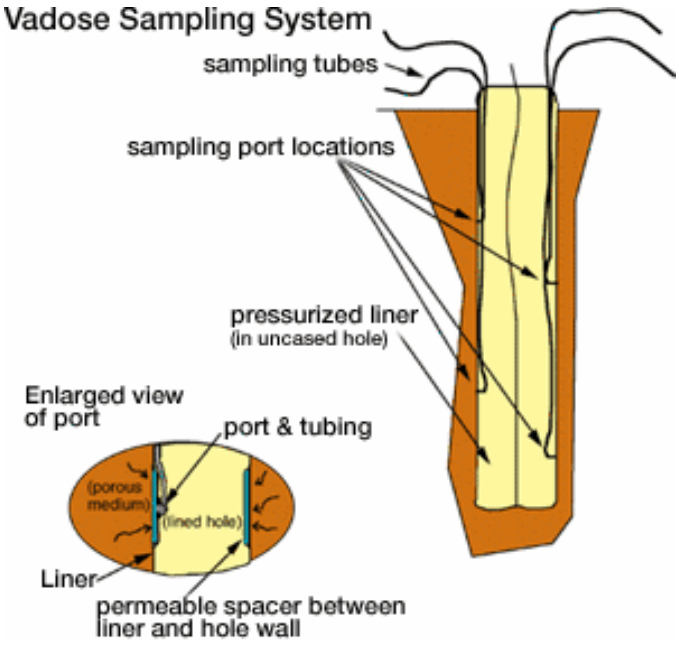

Figure 1.0-3 FLUTe vadose sampling system

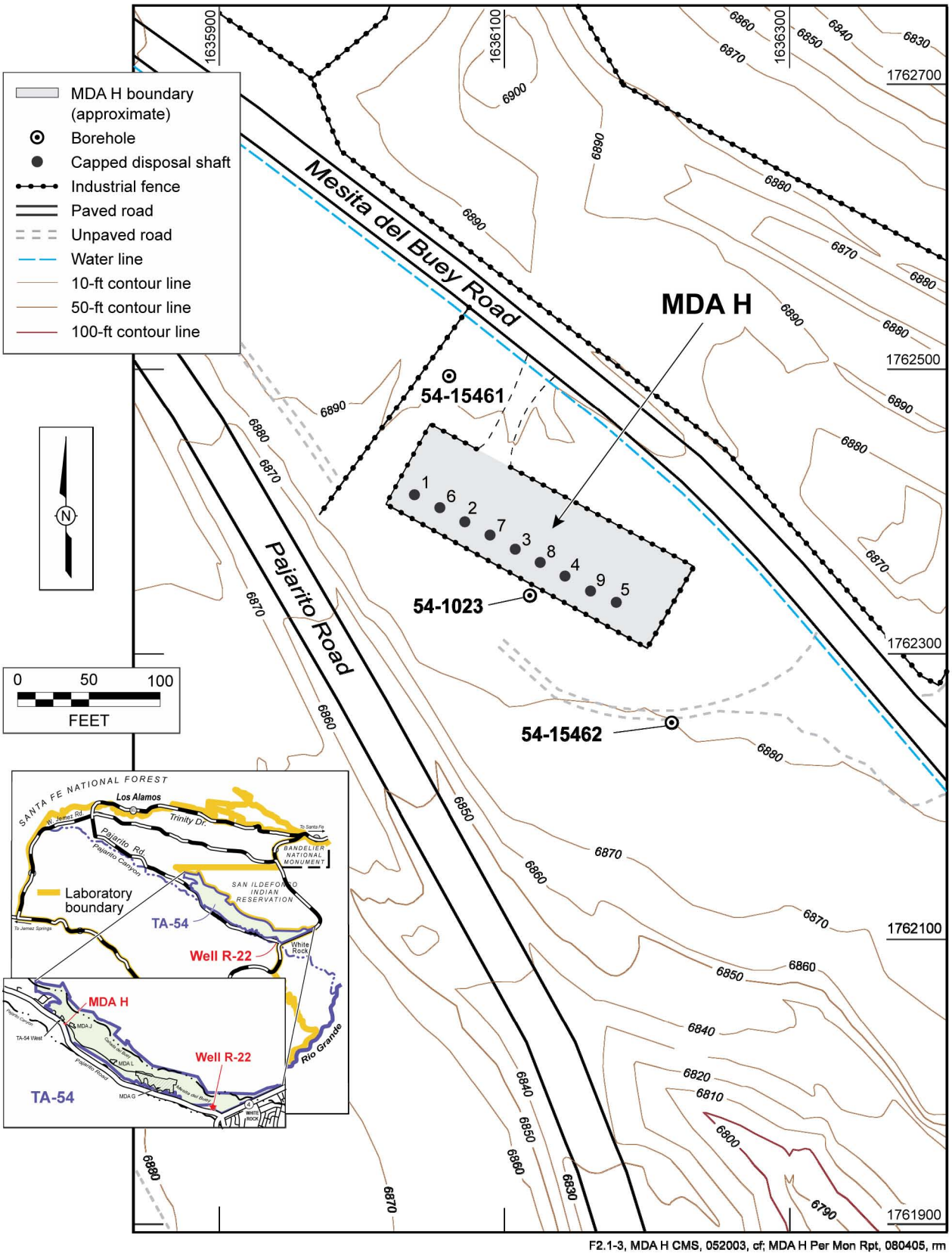

Figure 2.0-1 Locations of inactive disposal shafts and RFI boreholes at MDA H

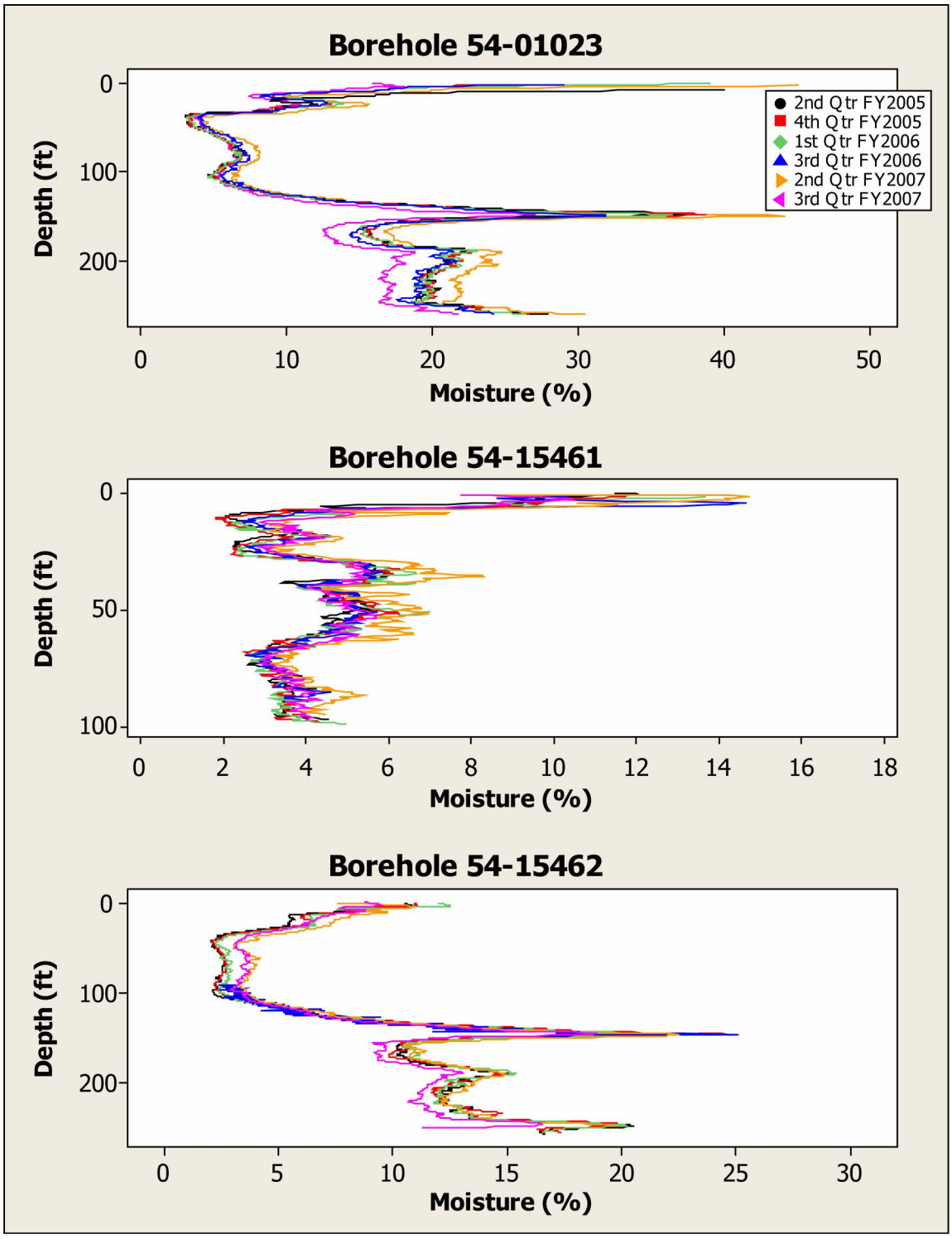

Figure 4.0-1 Moisture monitoring results for MDA H boreholes

Table 4.0-1
Carbon Dioxide Screening Results

Location ID	1st Qtr FY2007 Depth (ft)	2nd Qtr FY2007 Depth (ft)	3rd Qtr FY2007 Depth (ft)	4th Qtr FY2007 Depth (ft)	1st Qtr FY2007 CO_2 Concentration (percent)	2nd Qtr FY2007 CO_2 Concentration (percent)	3rd Qtr FY2007 CO_2 Concentration (percent)	4th Qtr FY2007 CO_2 Concentration (percent)
54-01023	10	10	10	10	0.7	0.7	1.1	1.3
54-01023	60	60	60	60	0.6	0.6	0.8	0.7
54-01023	100	100	100	100	0.6	0.6	0.7	0.6
54-01023	150	150	150	150	0.5	0.5	0.5	0.5
54-01023	200	200	200	200	0.5	0.5	0.5	0.4
54-01023	247	247	247	247	0.4	0.4	0.4	0.3
54-15461	10	10	10	10	0.5	0.6	0.8	0.9
54-15461	60	60	60	60	0.6	0.7	0.6	0.6
54-15461	95	95	95	95	0.6	0.6	0.6	0.5
54-15462	10	10	10	10	0.6	0.7	1.3	0.7
54-15462	60	60	60	60	0.7	0.7	0.8	0.5
54-15462	100	100	100	100	0.6	0.7	0.8	0.5
54-15462	150	150	150	150	0.4	0.5	0.5	0.2
54-15462	200	200	200	200	0.2	0.3	0.3	0.0
54-15462	254	254	254	254	0.1	0.0	0.3	0.1

Table 4.0-2
Oxygen Screening Results

Location ID	1st Qtr FY2007 Depth (ft)	2nd Qtr FY2007 Depth (ft)	3rd Qtr FY2007 Depth (ft)	4th Qtr FY2007 Depth (ft)	1st Qtr FY2007 O_2 Concentration (percent)	2nd Qtr FY2007 O_2 Concentration (percent)	3rd Qtr FY2007 O_2 Concentration (percent)	4th Qtr FY2007 O_2 Concentration (percent)
54-01023	10	10	10	10	20.5	20.0	19.9	19.5
54-01023	60	60	60	60	20.5	20.1	20.1	19.7
54-01023	100	100	100	100	20.5	20.2	20.3	19.9
54-01023	150	150	150	150	20.5	20.2	20.5	20.2
54-01023	200	200	200	200	20.5	20.2	20.4	20.4
54-01023	247	247	247	247	20.6	20.3	20.6	20.5
54-15461	10	10	10	10	20.8	20.4	19.9	19.8
54-15461	60	60	60	60	20.5	20.4	20.2	20.1
54-15461	95	95	95	95	20.5	20.4	20.2	20.2
54-15462	10	10	10	10	20.7	19.8	19.3	20.2
54-15462	60	60	60	60	20.5	20.3	19.8	20.2
54-15462	100	100	100	100	20.4	20.4	19.7	20.1
54-15462	150	150	150	150	20.5	20.5	20.0	20.1
54-15462	200	200	200	200	20.6	20.6	20.2	20.3
54-15462	254	254	254	254	20.6	20.8	20.5	20.2

Table 5.0-1
Pore Gas Tritium Results

Location ID	Depth (ft)	1st Qtr FY2007 Sample Concentration (pCi/L)	2nd Qtr FY2007 Sample Concentration (pCi/L)	3rd Qtr FY2007 Sample Concentration (pCi/L)	4th Qtr FY2007 Sample Concentration (pCi/L)
54-01023	10–12	5060000	7400000	9230000 (J-)	7820000
54-01023	60–62	2860000	3640000	4740000 (J-)	4660000
54-01023	100–102	884000	1090000	1350000 (J-)	1490000
54-01023	150–152	916000	826000	789000 (J-)	838000
54-01023	200–202	552000	780000	849000 (J-)	996000
54-01023	247–249	583000	392000	490000 (J-)	420000
54-15461	10–12	66400	8200	127000 (J-)	ND*
54-15461	60–62	54100	27300	518 (J-)	ND
54-15461	95–97	27700	69400	ND	ND
54-15462	10–12	1890	ND	527 (J-)	ND
54-15462	60–62	ND	ND	546 (J-)	ND
54-15462	100–102	ND	ND	ND	ND
54-15462	150–152	ND	ND	ND	ND
54-15462	200–202	ND	31000	ND	ND
54-15462	254–256	ND	ND	ND	30100

*ND = The analyte was not detected.

Table 5.0-2
Pore Gas VOC Results

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-01023	Acetone	10–12	ND[a]	24	ND	ND
54-01023	Acetone	60–62	ND	14	ND	15
54-01023	Acetone	150–152	ND	8.9	ND	ND
54-01023	Acetone	200–202	ND	18	41	9.3
54-01023	Acetone	247–249	ND	8.6	ND	ND
54-01023	Benzene	10–12	ND	15	ND	ND
54-01023	Benzene	60–62	ND	14	ND	ND
54-01023	Benzene	200–202	1.3	5.1	11	5.4
54-01023	Benzene	247–249	1.1	3.9	3.5	ND
54-01023	Butanol[1-]	60–62	—[b]	ND	ND	10
54-01023	Butanol[1-]	200–202	—	ND	11	10
54-01023	Butanone[2-]	10–12	ND	9.8	ND	ND
54-01023	Butanone[2-]	60–62	ND	8.3	ND	4.5
54-01023	Butanone[2-]	200–202	4.4	ND	10	4.1
54-01023	Carbon Disulfide	10–12	10	ND	ND	ND
54-01023	Carbon Disulfide	60–62	6.4	ND	ND	ND
54-01023	Carbon Disulfide	100–102	ND	ND	ND	3.5
54-01023	Carbon Disulfide	150–152	3.2	6.3	ND	ND
54-01023	Carbon Disulfide	247–249	ND	16	ND	ND
54-01023	Carbon Tetrachloride	10–12	1.6 (J)[c]	ND	ND	ND
54-01023	Carbon Tetrachloride	60–62	4.5 (J)	ND	ND	ND
54-01023	Carbon Tetrachloride	100–102	4.8 (J)	5.2	ND	ND
54-01023	Carbon Tetrachloride	150–152	6 (J)	8.2	6	5.7
54-01023	Carbon Tetrachloride	200–202	9 (J)	9.5	7.2	6.8
54-01023	Carbon Tetrachloride	247–249	11 (J)	10	9.5	9.9

Table 5.0-2 (continued)

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-01023	Chloroform	10–12	1.2	ND	ND	ND
54-01023	Chloroform	60–62	2.6	ND	ND	ND
54-01023	Chloroform	100–102	2.4	ND	ND	ND
54-01023	Chloroform	150–152	2.1	ND	ND	ND
54-01023	Chloroform	200–202	1.7	ND	ND	ND
54-01023	Chloroform	247–249	1.3	ND	ND	ND
54-01023	Cyclohexane	10–12	—	5.1	ND	ND
54-01023	Cyclohexane	60–62	—	5.2	ND	ND
54-01023	Cyclohexane	247–249	—	11	3.3	ND
54-01023	Dichlorodifluoromethane	10–12	14	15	15	16
54-01023	Dichlorodifluoromethane	60–62	24	18	21	25
54-01023	Dichlorodifluoromethane	100–102	24	24	20	25
54-01023	Dichlorodifluoromethane	150–152	25	28	22	27
54-01023	Dichlorodifluoromethane	200–202	24	24	21	23
54-01023	Dichlorodifluoromethane	247–249	23	22	17	22
54-01023	Dichloroethane[1,1-]	200–202	2	ND	ND	ND
54-01023	Dichloroethene[cis-1,2-]	200–202	5.4	ND	ND	ND
54-01023	Dichloropropane[1,2-]	60–62	2.9	ND	ND	ND
54-01023	Dichloropropane[1,2-]	100–102	3.5	ND	ND	ND
54-01023	Dichloropropane[1,2-]	150–152	4	4.8	ND	4.2
54-01023	Dichloropropane[1,2-]	200–202	7	4.9	5.2	5.1
54-01023	Dichloropropane[1,2-]	247–249	4.4	ND	ND	ND
54-01023	Ethylbenzene	10–12	ND	9.3	ND	ND
54-01023	Ethylbenzene	60–62	ND	7.9	ND	ND
54-01023	Ethylbenzene	200–202	1.2	ND	ND	ND
54-01023	Ethyltoluene[4-]	10–12	ND	7.3	ND	ND

Table 5.0-2 (continued)

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-01023	Ethyltoluene[4-]	60–62	ND	6.7	ND	ND
54-01023	Ethyltoluene[4-]	200–202	2	ND	ND	ND
54-01023	Hexane	10–12	—	18	ND	ND
54-01023	Hexane	60–62	—	18	ND	ND
54-01023	Methylene Chloride	200–202	0.73	ND	ND	ND
54-01023	Methylene Chloride	247–249	0.83	ND	ND	ND
54-01023	n-Heptane	10–12	—	6.6	ND	ND
54-01023	n-Heptane	60–62	—	7.2	ND	ND
54-01023	Propanol[2-]	10–12	—	12	34	ND
54-01023	Propanol[2-]	60–62	—	32	16	130
54-01023	Propanol[2-]	100–102	—	13	ND	ND
54-01023	Propanol[2-]	150–152	—	110	230	32
54-01023	Propanol[2-]	200–202	—	150	110	43
54-01023	Propanol[2-]	247–249	—	15	ND	ND
54-01023	Propylene	60–62	—	ND	ND	11
54-01023	Tetrachloroethene	10–12t	6	ND	12	8.7
54-01023	Tetrachloroethene	60–62	6.8	ND	9.7	6.5
54-01023	Tetrachloroethene	100–102	5.9	ND	6.6	ND
54-01023	Tetrachloroethene	150–152	5.1	ND	ND	ND
54-01023	Tetrachloroethene	200–202	19	ND	ND	ND
54-01023	Tetrachloroethene	247–249	12	ND	ND	ND
54-01023	Tetrahydrofuran	10–12	—	5	ND	ND
54-01023	Tetrahydrofuran	60–62	—	4.3	ND	ND
54-01023	Toluene	10–12	ND	53	ND	3.5
54-01023	Toluene	60–62	ND	49	4	ND
54-01023	Toluene	200–202	2.1	4.8	7.7	5.4

Table 5.0-2 (continued)

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-01023	Toluene	247–249	ND	9.7	8.8	ND
54-01023	Trichloro-1,2,2-trifluoroethane[1,1,2-]	10–12	8.4	7.1	8.1	7.8
54-01023	Trichloro-1,2,2-trifluoroethane[1,1,2-]	60–62	15	9.1	12	13
54-01023	Trichloro-1,2,2-trifluoroethane[1,1,2-]	100–102	15	14	12	12
54-01023	Trichloro-1,2,2-trifluoroethane[1,1,2-]	150–152	16	15	14	16
54-01023	Trichloro-1,2,2-trifluoroethane[1,1,2-]	200–202	17	13	14	12
54-01023	Trichloro-1,2,2-trifluoroethane[1,1,2-]	247–249	16	11	11	12
54-01023	Trichloroethane[1,1,1-]	10–12	8.1	7.4	6.2	5.8
54-01023	Trichloroethane[1,1,1-]	60–62	27	17	15	20
54-01023	Trichloroethane[1,1,1-]	100–102	30	25	21	25
54-01023	Trichloroethane[1,1,1-]	150–152	31	25	30	31
54-01023	Trichloroethane[1,1,1-]	200–202	31	18	23	20
54-01023	Trichloroethane[1,1,1-]	247–249	16	12	10	11
54-01023	Trichloroethene	10–12	4	ND	5.8	5.4
54-01023	Trichloroethene	60–62	7.3	ND	8.4	8.1
54-01023	Trichloroethene	100–102	6.9	5.5	6.3	7
54-01023	Trichloroethene	150–152	6.3	5.1	5.4	6.5
54-01023	Trichloroethene	200–202	6.1	ND	5.1	5.1
54-01023	Trichloroethene	247–249	4.7	ND	ND	ND
54-01023	Trichlorofluoromethane	10–12	60	55	70	61
54-01023	Trichlorofluoromethane	60–62	62	34	77	70
54-01023	Trichlorofluoromethane	100–102	55	45	58	46
54-01023	Trichlorofluoromethane	150–152	49	38	40	38
54-01023	Trichlorofluoromethane	200–202	38	33	31	26
54-01023	Trichlorofluoromethane	247–249	32	28	23	25
54-01023	Trimethylbenzene[1,2,4-]	10–12	ND	9	ND	ND

Table 5.0-2 (continued)

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-01023	Trimethylbenzene[1,2,4-]	60–62	ND	6.6	ND	ND
54-01023	Trimethylbenzene[1,2,4-]	200–202	3.2	ND	ND	ND
54-01023	Xylene[1,2-]	10–12	ND	9.4	ND	ND
54-01023	Xylene[1,2-]	60–62	ND	8.4	ND	ND
54-01023	Xylene[1,2-]	200–202	1.6	ND	ND	ND
54-01023	Xylene[1,3-]+Xylene[1,4-]	10–12	—	26	ND	ND
54-01023	Xylene[1,3-]+Xylene[1,4-]	60–62	—	23	ND	ND
54-15461	Acetone	10–12	ND	ND	10	ND
54-15461	Acetone	60–62	ND	ND	12	ND
54-15461	Benzene	10–12	ND	7.2	3.3	ND
54-15461	Benzene	60–62	1.7	ND	ND	ND
54-15461	Benzene	95–97	2.4	ND	ND	ND
54-15461	Butanone[2-]	10–12	ND	4.4	4.5	ND
54-15461	Carbon Disulfide	95–97	ND	ND	4.6	ND
54-15461	Carbon Tetrachloride	10–12	1.9 (J)	ND	ND	ND
54-15461	Carbon Tetrachloride	60–62	3.8 (J)	ND	ND	ND
54-15461	Carbon Tetrachloride	95–97	5.6 (J)	ND	ND	ND
54-15461	Cyclohexane	10–12	—	ND	8.4	ND
54-15461	Dichlorodifluoromethane	10–12	16	13	10	10
54-15461	Dichlorodifluoromethane	60–62	14	16	16	16
54-15461	Dichlorodifluoromethane	95–97	15	16	14	16
54-15461	Ethanol	10–12	—	7.9	ND	ND
54-15461	Ethylbenzene	10–12	ND	4.1	ND	ND
54-15461	Hexane	10–12	—	9.8	4.6	ND
54-15461	Methylene Chloride	10–12	ND	ND	3.8	ND
54-15461	n-Heptane	10–12	—	4.1	9.8	ND

Table 5.0-2 (continued)

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-15461	Tetrachloroethene	60–62	1.5	ND	ND	ND
54-15461	Tetrachloroethene	95–97	1.7	ND	ND	ND
54-15461	Tetrahydrofuran	10–12	—	3.2	ND	ND
54-15461	Toluene	10–12	ND	25	18	ND
54-15461	Toluene	60–62	1.5	ND	ND	ND
54-15461	Toluene	95–97	1.7	ND	ND	ND
54-15461	Trichloro-1,2,2-trifluoroethane[1,1,2-]	10–12	3.8	ND	ND	ND
54-15461	Trichloro-1,2,2-trifluoroethane[1,1,2-]	60–62	4.6	ND	ND	ND
54-15461	Trichloro-1,2,2-trifluoroethane[1,1,2-]	95–97	5.2	ND	ND	ND
54-15461	Trichloroethane[1,1,1-]	10–12	8.3	7.5	6.8	5.2
54-15461	Trichloroethane[1,1,1-]	60–62	9.5	9.8	10	8.8
54-15461	Trichloroethane[1,1,1-]	95–97	10	9.1	9.6	9.6
54-15461	Trichloroethene	95–97	1.2	ND	ND	ND
54-15461	Trichlorofluoromethane	10–12	11	9	7.4	6.4
54-15461	Trichlorofluoromethane	60–62	13	14	15	12
54-15461	Trichlorofluoromethane	95–97	14	15	14	14
54-15461	Trimethylbenzene[1,2,4-]	10–12	ND	4.7	ND	ND
54-15461	Xylene[1,2-]	10–12	ND	4.6	ND	ND
54-15461	Xylene[1,3-]+Xylene[1,4-]	10–12	—	13	3.6	ND
54-15462	Acetone	10–12	ND	ND	ND	12
54-15462	Acetone	100–102	ND	17	ND	20
54-15462	Acetone	150–152	ND	14	18	18
54-15462	Acetone	200–202	ND	16	12	ND
54-15462	Acetone	254–256	51	ND	9.7	ND
54-15462	Benzene	10–12	2.7	ND	ND	ND
54-15462	Benzene	60–62	0.67	ND	ND	ND

Table 5.0-2 (continued)

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-15462	Benzene	150–152	2.6	ND	3.4	ND
54-15462	Benzene	200–202	2.8	ND	4.4	ND
54-15462	Benzene	254–256	120	27	12	ND
54-15462	Butanol[1-]	150–152	—	ND	14	ND
54-15462	Butanone[2-]	10–12	3.1	ND	ND	3.2
54-15462	Butanone[2-]	60–62	ND	ND	2.7	ND
54-15462	Butanone[2-]	100–102	ND	ND	ND	4.8
54-15462	Butanone[2-]	150–152	ND	4	13	4.3
54-15462	Butanone[2-]	200–202	ND	4.4	11	ND
54-15462	Butanone[2-]	254–256	66	13	7.6	ND
54-15462	Carbon Disulfide	60–62	ND	14	40	ND
54-15462	Carbon Disulfide	100–102	10	15	8.2	7.2
54-15462	Carbon Disulfide	150–152	4	ND	ND	12
54-15462	Carbon Disulfide	200–202	ND	ND	ND	3.2
54-15462	Carbon Disulfide	254–256	ND	ND	21	6.6
54-15462	Carbon Tetrachloride	60–62	2.9 (J)	ND	ND	ND
54-15462	Carbon Tetrachloride	100–102	3.8 (J)	ND	ND	ND
54-15462	Carbon Tetrachloride	150–152	4.3 (J)	ND	ND	ND
54-15462	Carbon Tetrachloride	200–202	3.9 (J)	5.4	ND	ND
54-15462	Carbon Tetrachloride	254–256	4.9 (J)	ND	ND	ND
54-15462	Chloroform	60–62	1.3	ND	ND	ND
54-15462	Chloroform	100–102	1.5	ND	ND	ND
54-15462	Chloroform	150–152	1.1	ND	ND	ND
54-15462	Cyclohexane	60–62	—	ND	3.8	ND
54-15462	Cyclohexane	100–102	—	5.3	4	3.4
54-15462	Cyclohexane	150–152	—	11	3.6	4.4

Table 5.0-2 (continued)

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-15462	Cyclohexane	200–202	—	11	4	4.1
54-15462	Cyclohexane	254–256	—	ND	3.7	ND
54-15462	Dichlorodifluoromethane	10–12	14	25	16	17
54-15462	Dichlorodifluoromethane	60–62	48	49	9	46
54-15462	Dichlorodifluoromethane	100–102	57	60	44	56
54-15462	Dichlorodifluoromethane	150–152	47	64	21	36
54-15462	Dichlorodifluoromethane	200–202	14	31	10	9.3
54-15462	Dichlorodifluoromethane	254–256	29	20	28	35
54-15462	Dichloroethane[1,1-]	60–62	3.6	ND	ND	ND
54-15462	Dichloroethane[1,1-]	100–102	5	3.9	3.7	3.8
54-15462	Dichloroethane[1,1-]	150–152	4.4	4.1	ND	ND
54-15462	Dichloroethane[1,1-]	200–202	2.5	ND	ND	ND
54-15462	Dichloroethane[1,1-]	254–256	0.89	ND	ND	ND
54-15462	Dichloroethene[1,1-]	60–62	ND	3.9	ND	ND
54-15462	Dichloroethene[1,1-]	100–102	1.6	5.9	6	ND
54-15462	Dichloroethene[1,1-]	150–152	2.5	7.6	ND	ND
54-15462	Dichloroethene[1,1-]	200–202	2.2	5.6	ND	ND
54-15462	Dichloroethene[1,1-]	254–256	2.1	ND	ND	ND
54-15462	Dichloropropane[1,2-]	150–152	1.4	ND	ND	ND
54-15462	Dichloropropane[1,2-]	200–202	1.9	ND	ND	ND
54-15462	Dichloropropane[1,2-]	254–256	1	ND	ND	ND
54-15462	Ethylbenzene	254–256	3.1	ND	ND	ND
54-15462	Ethyltoluene[4-]	254–256	3.1	ND	ND	ND
54-15462	Hexane	254–256	—	20	ND	ND
54-15462	Hexanone[2-]	254–256	3.8 (J)	ND	ND	ND
54-15462	Methylene Chloride	60–62	ND	ND	5.6	ND

Table 5.0-2 (continued)

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-15462	Propanol[2-]	60–62	—	ND	16	ND
54-15462	Propanol[2-]	150–152	—	ND	10	ND
54-15462	Tetrachloroethene	60–62	6.1	ND	ND	ND
54-15462	Tetrachloroethene	100–102	7	ND	6.5	ND
54-15462	Tetrachloroethene	150–152	5.9	ND	ND	ND
54-15462	Tetrachloroethene	200–202	3.7	ND	ND	ND
54-15462	Tetrachloroethene	254–256	1.6	ND	ND	ND
54-15462	Tetrahydrofuran	10–12	—	2.4	6	11
54-15462	Tetrahydrofuran	60–62	—	ND	ND	7.3
54-15462	Tetrahydrofuran	100–102	—	ND	ND	4.3
54-15462	Tetrahydrofuran	150–152	—	ND	7.2	ND
54-15462	Tetrahydrofuran	200–202	—	ND	5	ND
54-15462	Toluene	10–12	2.2	ND	3.3 (U)	ND
54-15462	Toluene	150–152	3	3.5	3.5	ND
54-15462	Toluene	200–202	2.5	3.2 (U)	4.7	ND
54-15462	Toluene	254–256	91	62	8.6	ND
54-15462	Trichloro-1,2,2-trifluoroethane[1,1,2-]	10–12	8.2	16	9.2	7.7
54-15462	Trichloro-1,2,2-trifluoroethane[1,1,2-]	60–62	36	30	6.7 (U)	29
54-15462	Trichloro-1,2,2-trifluoroethane[1,1,2-]	100–102	43	39	32	31
54-15462	Trichloro-1,2,2-trifluoroethane[1,1,2-]	150–152	37	42	13	19
54-15462	Trichloro-1,2,2-trifluoroethane[1,1,2-]	200–202	10	19	7.2 (U)	7 (U)
54-15462	Trichloro-1,2,2-trifluoroethane[1,1,2-]	254–256	21	24 (U)	19	22
54-15462	Trichloroethane[1,1,1-]	10–12	33	59	37	37
54-15462	Trichloroethane[1,1,1-]	60–62	160	140	60	120
54-15462	Trichloroethane[1,1,1-]	100–102	190	170	140	140
54-15462	Trichloroethane[1,1,1-]	150–152	160	170	89	100

Table 5.0-2 (continued)

Location ID	Analyte	Depth (ft)	1st Qtr FY2007 Sample Concentration (µg/m³)	2nd Qtr FY2007 Sample Concentration (µg/m³)	3rd Qtr FY2007 Sample Concentration (µg/m³)	4th Qtr FY2007 Sample Concentration (µg/m³)
54-15462	Trichloroethane[1,1,1-]	200–202	95	99	71	64
54-15462	Trichloroethane[1,1,1-]	254–256	47	18	40	40
54-15462	Trichloroethene	60–62	6.3	5.3	5.6	5.2
54-15462	Trichloroethene	100–102	8.7	8.1	8.3	7.8
54-15462	Trichloroethene	150–152	9.2	9.7	8.1	9.1
54-15462	Trichloroethene	200–202	7	9.4	7.3	5.9
54-15462	Trichloroethene	254–256	5.7	17 (U)	4.9 (U)	4.8
54-15462	Trichlorofluoromethane	10–12	13	25	15	13
54-15462	Trichlorofluoromethane	60–62	49	51	10	43
54-15462	Trichlorofluoromethane	100–102	56	58	49	48
54-15462	Trichlorofluoromethane	150–152	45	58	20	28
54-15462	Trichlorofluoromethane	200–202	16	27	11	9.9
54-15462	Trichlorofluoromethane	254–256	23	ND	22	24
54-15462	Trimethylbenzene[1,2,4-]	254–256	16	ND	ND	ND
54-15462	Trimethylbenzene[1,3,5-]	254–256	2.9	ND	ND	ND
54-15462	Xylene[1,2-]	10–12	1.4	ND	ND	ND
54-15462	Xylene[1,2-]	254–256	1.1	ND	ND	ND
54-15462	Xylene[1,3-]+Xylene[1,4-]	10–12	—	ND	5.2	ND
54-15462	Xylene[1,3-]+Xylene[1,4-]	254–256	—	29	4 (U)	ND

[a] ND = The analyte was not detected.

[b] — = Analyte was not requested.

[c] (J) and other data qualifiers are defined in Table A-1.0-2.

Table 5.0-3
Screening of VOCs Detected in Pore Gas at MDA H

Chemical	Max Pore-Gas Concentration (µg/m^3)	Dimensionless Henry's Constant (H')	Screening Level (SL) (µg/L)	Max Conc/ (1000 x H' x SL)
Acetone	51	0.0016	5500[a]	0.0058
Benzene	120	0.228	5[b]	0.11
Butanol[1-]	14	0.000347	3700[a]	0.011
Butanone[2-]	66	0.0011	7100[a]	0.0085
Carbon Disulfide	40	1.2	1040[a]	3.2E-05
Carbon Tetrachloride	11	1.25	5[b]	0.0018
Chloroform	2.6	0.15	100[c]	0.00017
Cyclohexane	11	na[c]	na	na
Dichlorodifluoromethane	64	4.1	390[a]	4.0E-05
Dichloroethane[1,1-]	5	0.23	25[d]	0.00087
Dichloroethene[1,1-]	7.6	1.1	5[d]	0.0014
Dichloroethene[cis-1,2-]	5.4	0.167	70[b]	0.0005
Dichloropropane[1,2-]	7	0.11	5[b]	0.013
Ethanol	7.9	na	n/a	na
Ethylbenzene	9.3	0.323	700[b]	4.1E-05
Ethyltoluene[4-]	7.3	na	n/a	na
n-Heptane	9.8	na	n/a	na
Hexane	20	5.0	416[a]	9.6E-06
Hexanone[2-]	3.8	na	n/a	na
Methylene Chloride	5.6	0.09	5[b]	0.012
Propanol[2-]	230	na	na	na
Propylene	11	na	n/a	na
Tetrachloroethene	19	0.754	5[b]	0.0050
Tetrahydrofuran	11	na	na	na
Toluene	91	0.272	750[c]	0.00045
Trichloro-1,2,2-trifluoroethane[1,1,2-]	43	21.4	59000[a]	3.4E-08
Trichloroethane[1,1,1-]	190	0.705	60[d]	0.0045
Trichloroethene	9.7	0.422	5[b]	0.0046
Trichlorofluoromethane	77	4.0	1300[a]	1.5E-05
Trimethylbenzene[1,2,4-]	16	0.23	12[a]	0.0058
Trimethylbenzene[1,3,5-]	2.9	0.32	12[a]	0.00076
Xylene[1,2-]	9.4	0.213	1400[a]	3.2E-05
Xylene[1,3-]+Xylene[1,4-]	29	0.30	203[a]	0.00048

[a] EPA Region 6 human health media-specific screening level for tap water.

[b] EPA MCL (40 CFR 141.61).

[c] na = Not available.

[d] NMWQCC groundwater standard 920.6.2.3103 New Mexico Administrative Code (NMAC).

Appendix A

Quality Assurance/Quality Control Program

A-1.0 INTRODUCTION

In accordance with Section XI.D.13.b of the March 1, 2005, Compliance Order on Consent (the Consent Order), this appendix discusses the analytical methods, data quality objectives, and data quality review. In addition, this appendix summarizes the effects of data quality exceptions on the acceptability of the field and laboratory analytical data as they impact the investigation and site status.

Quality assurance (QA), quality control (QC), and data validation procedures were implemented in accordance with the Los Alamos National Laboratory (LANL or the Laboratory) "Quality Assurance Project Plan Requirements for Sampling and Analysis" (LANL 1996, 054609) and the Laboratory's statement of work for analytical services (LANL 2000, 071233). The results of the QA/QC activities were used to estimate the accuracy, bias, and precision of the analytical measurements. QC samples, including method blanks, blank spikes, matrix spikes, laboratory control samples (LCS), internal standards, initial and continuing calibrations, surrogates, and tracers, were used to assess laboratory accuracy and bias.

The type and frequency of QC analyses are described in the analytical services contract. Other QC factors, such as sample preservation and holding times, were also assessed. The requirements for sample preservation and holding times are given in the Environmental Programs Directorate's Standard Operating Procedure (SOP) 01.02, Sample Containers and Preservation. Evaluating these QC indicators allows estimates to be made of the accuracy, bias, and precision of the analytical suites. A focused data validation was also performed for all the data packages (also referred to as request numbers). The procedures used for data validation are given in Table A-1.0-1. The focused validation followed the same procedure discussed above and included a more detailed review of the raw data results generated by the analytical laboratory. Copies of the raw analytical data, laboratory logbooks, and instrument printouts used during focused validation are provided in data packages as part of Appendix B (on attached CD).

Analytical data were reviewed and evaluated based on National Functional Guidelines for inorganic and organic chemical data review where applicable (EPA 1994, 048639; EPA 1999, 066649). Data have also been assessed using guidelines established in SW-846 (EPA 1997, 057589). As a result of the data validation and assessment efforts, qualifiers have been assigned to each analytical record. Definitions for the data qualifiers used in data validation are provided in Table A-1.0-2. Data validators and reviewers made judgments about the following industry-accepted QA/QC analytical quality functions:

- **Maintenance of chain of custody**

  To maintain chain of custody (COC) is to document or demonstrate the possession of an item by only authorized individuals. The COC process provides confidence in, and documentation of, analytical data integrity by establishing the traceability of the data from the time of receipt through processing to final maintenance as a record.

- **Sample documentation**

  Establishing sample documentation acceptability is the first step toward verifying that an analytical system has produced data of known quality. Documentation depends upon the accessibility of review items that accurately and completely describe the work performed. In the absence of adequate sample documentation, data quality cannot be independently verified.

- **Sample preservation**

  Sample preservation is the use of specific types of sample container and preservation techniques. Sample preservation is mandatory for hazardous site investigations because the integrity of any sample decreases over time. Physical factors (light, pressure, temperature, etc.),

chemical factors (changes in pH, volatilization, etc.), and biological factors may alter the original quality of the sample. Because the various target parameters are uniquely altered at varying rates, distinct sample containers, preservation techniques, and holding times have been established to maintain sample integrity for a reasonable and acceptable period of time.

- **Holding time**

  The holding time is the maximum amount of time a sample can be stored without unacceptable changes in analyte concentrations. Holding times apply under prescribed conditions; deviations from these conditions may affect the holding time. Extraction holding time refers to the time that lapses between sample collection and sample preparation; analytical holding time refers to the time that lapses between sample preparation and analysis.

- **Initial and continuing calibration (including interference-check standards)**

  Calibration verification is the establishment of a quantitative relationship between the response of the analytical procedure and the concentration of the target analyte. There are two aspects of calibration verification: initial and continuing. The initial calibration verifies the accuracy of the calibration curve as well as the individual calibration standards being used to perform the calibration. The continuing calibration ensures that the initial calibration is still holding and is correct as the instrument is used to process samples. Interference-check samples are used to determine if a high concentration of a single analyte in a sample interferes with the accurate quantitation of other analytes.

- **Analyte identification (including spectra review and thermal ionization cavity review)**

  Analyte identification is the process of associating an instrument signal with a compound or analyte of interest. Evaluation of signal retention times, spectral overlap, multipeak pattern matching, and mass spectral library searches are tools for making analyte identification determinations.

- **Analyte quantitation**

  Analyte quantitation is the association of an instrument signal with a concentration and the determination that a recorded signal is detected or not detected. Detection limits, instrument calibration linear ranges, internal standards, and carrier recoveries are tools for making analyte quantitation evaluations.

  Organic and inorganic chemical results are considered to be not detected if the reported results are less than or equal to the method detection limit adjusted by sample-specific dilution or concentration factors.

  Radiochemical results reported with values less than the minimum detectable activity are considered to be not detected (U). Each radiochemical result is also compared to the corresponding 1-sigma total propagated uncertainty (TPU). If the result is not greater than three times the TPU, it is also qualified as not detected (U).

- **Method blank**

  A method blank is an analyte-free matrix to which all reagents are added in the same volumes or proportions as those used in the environmental sample processing and which is extracted and analyzed in the same manner as the corresponding environmental samples. Method blanks are used to assess the potential for sample contamination during extraction and analysis. All target analytes should be below the contract-required detection limit in the method blank (LANL 2000, 071233).

- **Matrix spike recoveries**

  A matrix spike is an aliquot of sample spiked with a known concentration of the target analyte(s). Matrix spike samples are used to measure the ability to recover prescribed analytes from a native sample matrix. Spiking typically occurs before sample preparation and analysis. Acceptable percentage recoveries for matrix spikes vary by method but should generally be greater than 10% for an analytical result to be usable (LANL 2000, 071233).

- **Surrogate and tracer recoveries**

  A surrogate (an organic chemical compound) and a tracer (a radiochemical isotope) are similar in composition and behavior to target analytes but are not typically found in environmental samples. Surrogates and tracers are added to every blank, sample, and spike to evaluate the efficiency with which target analytes are recovered during extraction and analysis. The recovery percentages of the surrogates and tracers vary by method but should generally be greater than 10% for an analytical result to be usable (LANL 2000, 071233).

- **Internal standard responses and carrier recoveries**

  Internal standards and carriers are chemical compounds that are added to blank, sample, and standard extracts at known concentrations. They are used to compensate for (1) analyte concentration changes that might occur during storage of the extract, and (2) quantitation variations that can occur during analysis. Internal standard responses and carrier recoveries are used to adjust the reported concentrations for the quantitation of target analytes. The response factors for internal standards vary by method but should generally be within the range of $\geq$50% to $\leq$200%. The recoveries for carriers vary by method but should generally be greater than 10% for an analytical result to be usable (LANL 2000, 071233).

- **LCS recoveries**

  An LCS is a known matrix that has been spiked with compound(s) that are representative of the target analytes. The LCS is used to document laboratory performance. The acceptance criteria for LCSs are method-specific but should generally be greater than 10% for an analytical result to be usable (LANL 2000, 071233).

- **Laboratory and field duplicates (including serial dilutions)**

  Laboratory duplicates are two portions of a sample taken from the same sample container (prepared for analysis and analyzed independently but under identical conditions) used to assess or demonstrate acceptable laboratory-method precision at the time of analysis. Each duplicate sample is equally representative of the original material. Duplicate analyses are also performed to generate data and to determine the long-term precision of an analytical method on various matrices. All relative percent differences (RPD) between samples and field duplicates should be $\pm$35% (LANL 2000, 071233). RPD is defined by the equation RPD = [|D1 – D2| / ((D1 + D2) / 2)] $\times$ 100%, where D1 and D2 represent analytical measurements of duplicate samples.

  For radionuclides the duplicate error ratio (DER) may also be used to quantify precision. The DER is defined by the equation DER = |S - D| / sqrt($2\sigma S^2 + 2\sigma D^2$), where S represents the original sample value, D represents the duplicate value, and 2σS and 2σD represent the 2-sigma uncertainties surrounding the original and duplicate samples, respectively. A DER below 3 indicates sample to field duplicate precision that is in control.

  Field duplicates are independent samples collected as closely as possible to the same point in space and time. They are two separate samples taken from the same source, stored in separate containers, and analyzed independently.

Serial dilution checks are performed for certain inorganic analyses to determine if dilutions have been prepared correctly and to identify any effects that may arise from characteristics of the sample matrix.

- **Trip blanks, field blanks, and rinsate blanks**

  Trip blanks, field blanks, and rinsate blanks are all collected and analyzed to establish whether concentration values assigned to an analyte or compound are attributable to contamination of the analytical system or to the presence of the analyte in the samples collected.

  - *Trip blank*—a sample of analyte-free medium that is taken to the sampling site and returned unopened to an analytical laboratory. Trip blanks are used to identify contamination attributable to shipping or field handling procedures. Trip blanks are required for all field events that include the collection of volatile samples.
  - *Field blank*—a sample of analyte-free medium that is taken to the sampling site and exposed to the atmosphere during sample-collection activities. Field blanks are used to measure contamination introduced during sample collection.
  - *Equipment rinsate blank*—a sample of analyte-free medium that has been used to rinse the sampling equipment. It is collected after completion of decontamination and before sampling. Equipment rinsate blanks are used to assess the cleanliness of sampling equipment.

A-2.0 LABORATORY ANALYSIS SUMMARY

During each of four quarters of fiscal year (FY) 2007, 15 pore-gas samples and at least two field QC samples were collected at Solid Waste Management Unit (SWMU) 54-004, also known as Material Disposal Area (MDA) H. Analyses were conducted for volatile organic compounds (VOCs) using U.S. Environmental Protection Agency (EPA) Method TO-15 and for tritium using EPA Methods 114 (National Emissions Standards for Hazardous Air Pollutants Part 61, Appendix B) and 906.0 (Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA/600/4-80-032). All QC procedures were followed as required by the analytical services contract. Table A-2.0-1 lists the analytical method used for organic chemical analyses. Table A-2.0-2 lists the analytical methods used for radiochemical analyses.

Sampling locations, sampling ports, and validated analytical results are given in Tables 5.0-1 and 5.0-2 of the monitoring report. The data, including the qualified data, are usable for evaluation and interpretive purposes. The entire data set meets the standards set for use in this report.

The analytical methods used for radionuclides and organic analytes are summarized in the following sections. The required estimated detection limit (EDL) or estimated quantitation limit (EQL) for each analyte is prescribed in the analytical services contract.

A-3.0 ORGANIC CHEMICAL ANALYSES

The summaries for these analyses are presented in the sections below. All QC procedures were followed as required by the analytical services contract.

- **Maintenance of COC**

  COC was properly maintained for all samples.

- **Sample documentation and dilutions**

  Samples were properly documented in the field.

- **Sample preservation**

  Preservation criteria were met for all samples.

- **Holding time**

  Holding times were met for all samples.

- **Initial and continuing calibrations**

  Initial and continuing calibration acceptance criteria were met for all but 51 organic chemical records in the first quarter FY2007, and 114 organic chemical records in the second quarter of FY2007. The initial calibration percent relative standard deviation was greater than 25% in cases where the criteria were not met. Thirty-five records affected during first quarter FY2007 and all second quarter FY2007 records were qualified as not detected, with the reported values being an estimate of the sample-specific EDL or EQL. Sixteen records affected during first quarter FY2007 were qualified as estimated.

- **Analyte identification (including internal standards, spectra review, and thermal ionization cavity review)**

  Analyte identification criteria were met for all samples.

- **Analyte quantitation**

  Analyte quantitation criteria were met for all sample analyses.

- **Method blank**

  Method blank results for organic chemical analyses were within acceptable limits except for 15 acetone records in the first quarter FY2007 and were within acceptable limits for all other FY2007 analytical records. In cases where criteria were not met, the analyte was detected in the method blank and the detected sample result for the analyte was less than 5 times the amount in the blank. Associated records were qualified as not detected.

- **Matrix spike recoveries**

  All matrix spike recoveries for organic chemical analyses were within acceptable limits.

- **Surrogate recoveries**

  All surrogate recoveries for organic chemical analyses were within acceptable limits.

- **Internal standard responses**

  All internal standard responses for organic chemical analyses were within acceptable limits.

- **LCS recoveries**

  The LCS recoveries for organic chemical analyses were within acceptable limits.

- **Laboratory and field duplicates**

  Laboratory and field duplicates collected for organic chemical analyses indicate acceptable precision for all but five of the FY2007 sample analyses. Relative percent difference exceeded 35% for one tetrachloroethene, one acetone, one 2-butanone, one carbon disulfide, and one trichloroethene records. The FY2007 sample records potentially affected by larger than expected field duplicate RPDs are listed in Table A-3.0-1. No sample qualification is performed based on field duplicate performance.

- **Trip blanks, field blanks, and rinsate blanks**

  Trip blank and rinsate blank samples are not collected during VOC SUMMA sampling.

  Field blanks collected during FY2007, for EPA Method TO-15 analysis did not contain detected concentrations of VOCs.

A-4.0 RADIOCHEMICAL ANALYSES

- **Maintenance of COC**

  The COC was properly maintained for all samples.

- **Sample documentation and dilutions**

  Samples were properly documented in the field.

- **Sample preservation**

  Preservation criteria were met for all samples.

- **Holding time**

  Holding times were met for all radiochemical digestions and analyses.

- **Initial and continuing calibrations**

  Initial and continuing calibrations were acceptable for all radionuclide analyses.

- **Analyte identification**

  Analyte identification criteria were met for all radionuclide analyses.

- **Analyte quantitation**

  Analyte quantitation criteria were met for all radionuclide analyses.

- **Method blank**

  The method blank results for radionuclide analyses were within acceptable limits for all the analyses in third quarter FY2007. In first, second, and fourth quarters of FY2007, five tritium records in each quarter were qualified as not detected because tritium was detected in the method blank, and tritium concentrations in the sample were less than or equal to the amount in the blank.

- **Matrix spike recoveries**

  Matrix spike recoveries for radionuclide analyses were within acceptable limits for all the analyses.

- **Carrier and tracer recoveries**

  Carrier and tracer recoveries are not determined for tritium analyses.

- **LCS recoveries**

  The LCS recoveries for radionuclide analyses were within acceptable limits for all the analyses in the first, second, and fourth quarters of FY2007. The LCS recovery was less than 80% but was greater than 10%. Five nondetected affected records were qualified as not detected, with the reported values being an estimate of the sample-specific quantitation limits or detection limits. Ten detected affected records were qualified as estimated and biased low.

- **Laboratory and field duplicates**

  Laboratory and field duplicates collected for tritium analyses indicate acceptable precision for all FY2007 sample analyses.

- **Trip blanks, field blanks, and rinsate blanks**

  Trip blank and rinsate blank samples are not collected during tritium pore gas sampling.

  The field blanks collected on March 28, 2007, and on July 24, 2007, for EPA Method 906.0 analysis were contaminated with detectable amounts of tritium. The second quarter FY2007 tritium field blanks reported activities of 410 and 1,380 pCi/L are not within 5 times the concentration of any sample containing detected tritium. The fourth quarter FY2007 tritium field blank activity of 1844 pCi/L is not within 5 times the concentration of any sample containing detected tritium. Sample results are not qualified based on field blank contamination.

A-5.0 FIELD-MONITORING SUMMARY

Field-monitoring data are less costly to generate than laboratory data and are immediately available to guide field decisions. Field-monitoring results are generated by rapid methods of analysis that provide less precision than laboratory analyses. Field-monitoring data provide analyte (or at least chemical class) identification and quantification, although the quantification may be relatively imprecise.

Field monitoring of subsurface vapor at MDA H is conducted using guidance provided in SOP-06.31, Sampling of Subatmospheric Air. This procedure covers the use of the Landtec GEM 500 photoionization detector (PID). Field monitoring of subsurface moisture at MDA H is conducted using guidance provided in SOP-07.05, Subsurface Moisture Measurements Using a Neutron Probe. This procedure covers the use of the CPN 503DR Hydroprobe moisture gauge.

The Landtec GEM 500 PID is calibrated annually by a certified calibration laboratory. During calibration, methane (CH_4), oxygen (O_2), and carbon dioxide (CO_2) zero points are set, and each analyte's calibration response curve is developed. The CH_4 reading is filtered to an infrared absorption frequency of 3.41 mm (nominal), the frequency specific to hydrocarbon bonds. Landtec instruments are calibrated using certified methane mixtures and will give correct readings provided no other hydrocarbon gases are present in the sample (e.g., ethane, propane, butane, etc.). If other hydrocarbons are present, the CH_4 reading will be higher (never lower) than the actual CH_4 concentration being monitored. The extent to which the methane reading is affected depends upon the concentration of CH_4 in the sample and the concentration of the

other hydrocarbons. The effect of other hydrocarbons is nonlinear and difficult to predict. The CO_2 reading is filtered to an infrared absorption frequency of 4.29 µm (nominal), the frequency specific to CO_2. Therefore, any other gases usually found on landfill sites will not affect the CO_2 reading. The O_2 sensor is a galvanic cell type and suffers no influence from CO_2, carbon monoxide, hydrogen sulfide, nitrate, sulfide, or hydrogen.

Calibration of the PID is confirmed before each day's use by analyzing multiple readings of ambient air. Zero readings of methane and CO_2 are expected. Oxygen is expected to read 20.9%, and readings within ± 25% of 20.9% are considered acceptable.

Analytical data generated using the Landtec GEM-500 PID is supported by annual calibration records that bracket the periods of analyses. Calibration is performed by Geotech's Colorado Service Center in Denver, Colorado. Calibration information is reported below for the four Landtec PIDs used to generate results presented in this periodic monitoring report.

Unit 1530 was calibrated on December 4, 2006. The zero point was set for CH_4, CO_2, and O_2. Calibration was performed so that CH_4 and CO_2 reached ±15% of a known concentration, and O_2 was set to read ambient air at 20.9%. Pump flow was confirmed to be 525 cc per min.

Unit 916 was calibrated on March 2, 2007. The zero point was set for CH_4, CO_2, and O_2. Calibration was performed so that CH_4 and CO_2 reached ±15% of a known concentration, and O_2 was set to read ambient air at 20.9%. Pump flow was confirmed to be 550 cc per min.

Unit 916 was calibrated on May 1, 2007. The zero point was set for CH_4, CO_2, and O_2. Calibration was performed so that CH_4 and CO_2 reached ±15% of a known concentration, and O_2 was set to read ambient air at 20.9%. Pump flow was confirmed to be 525 cc per min.

Unit 913 was calibrated on May 23, 2007. The zero point was set for CH_4, CO_2, and O_2. Calibration was performed so that CH_4 and CO_2 reached ±15% of a known concentration, and O_2 was set to read ambient air at 20.9%. Pump flow was confirmed to be 350 cc per min.

Unit 913 was calibrated on July 19, 2007. The zero point was set for CH_4, CO_2, and O_2. Calibration was performed so that CH_4 and CO_2 reached ±15% of a known concentration, and O_2 was set to read ambient air at 20.9%. Pump flow was confirmed to be 375 cc per min.

Calibration of the moisture probe is confirmed before each day's use by collecting multiple readings of the source in its wax-lined shield. The standard count serves as an instrument check to ensure that the instrument source, detector, and electronics are operating within the manufacturer's specifications. A series of source measurements should yield a chi-squared distribution of counts (χ) result between 0.75 and 1.25. If the instrument gives a χ result outside this range, it requires servicing by the manufacturer.

A-6.0 REFERENCES

The following list includes all documents cited in this appendix. Parenthetical information following each reference provides the author(s), publication date, and ER ID number. This information is also included in text citations. ER ID numbers are assigned by the Environmental Programs Directorate's Records Processing Facility (RPF) and are used to locate the document at the RPF and, where applicable, in the master reference set.

Copies of the master reference set are maintained at the NMED Hazardous Waste Bureau; the U.S. Department of Energy–Los Alamos Site Office; the U.S. Environmental Protection Agency, Region 6;

and the Directorate. The set was developed to ensure that the administrative authority has all material needed to review this document, and it is updated with every document submitted to the administrative authority. Documents previously submitted to the administrative authority are not included.

EPA (U.S. Environmental Protection Agency), February 1994. "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," EPA-540/R-94/013, Office of Emergency and Remedial Response, Washington, D.C. (EPA 1994, 048639)

EPA (U.S. Environmental Protection Agency), 1997. "Test Methods for Evaluating Solid Waste, Laboratory Manual, Physical/Chemical Methods," SW-846, 3rd ed., Update III, Office of Solid Waste and Emergency Response, Washington, D.C. (EPA 1997, 057589)

EPA (U.S. Environmental Protection Agency), October 1999. "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," EPA540/R-99/008, Office of Emergency and Remedial Response, Washington, D.C. (EPA 1999, 066649)

LANL (Los Alamos National Laboratory), March 1996. "Quality Assurance Project Plan Requirements for Sampling and Analysis," Los Alamos National Laboratory document LA-UR-96-441, Los Alamos, New Mexico. (LANL 1996, 054609)

LANL (Los Alamos National Laboratory), December 2000. "University of California, Los Alamos National Laboratory (LANL), I8980SOW0-8S, Statement of Work for Analytical Laboratories," Rev. 1, Los Alamos National Laboratory, Los Alamos, New Mexico. (LANL 2000, 071233)

Table A-1.0-1
Data Analysis and Assessment Procedures

Procedure	Title	Effective Date
SOP-15.01, Rev. 1	Routine Validation of Volatile Organic Data	4/20/2004
SOP-15.07, Rev. 1, ICN 1	Routine Validation of Chemical Separation Alpha Spectrometry, Gas Proportional Counting, and Liquid Scintillation Data	4/20/2004

Table A-1.0-2
Definition of Data Qualifiers Used in Data Validation

Qualifier	Explanation
U	The analyte was analyzed for but not detected. Reported value is the sample-specific EQL or detection limit.
J	The reported value should be regarded as estimated.
J+	The reported value should be regarded as estimated and biased high.
J-	The reported value should be regarded as estimated and biased low.
UJ	The analyte was analyzed for but not detected. Reported value is an estimate of the sample-specific quantitation limit or detection limit.
R	The sample results were rejected because of serious deficiencies in the ability to analyze the sample and meet quality control criteria; presence or absence cannot be verified.

Table A-2.0-1
Analytical Method Used for Organic Chemical Analyses

Analytical Method	Analytical Description	Target Compound List
EPA Method TO-15—Sampling and Analysis	VOCs in air	See analytical services statement of work (LANL 2000, 071233)

Table A-2.0-2
Analytical Methods Used for Radionuclide Analyses

Analytical Method	Analytical Technique	Radionuclide
EPA Method 114—Sampling EPA Method 114—Extraction EPA Method 906.0—Analysis	Liquid scintillation	Tritium

Table A-3.0-1
Sample Records with Large Field Duplicate RPD

Quarter/ Year	Location ID	Depth (ft)	Analyte Name	Units	FD Quant Limit	FD Result	FD Qual.	Sample Quant Limit	Sample Result	Sample Qual.	RPD
4Q07	54-01023	247	Acetone	µg/m^3	8.1	20	—	8.3	8.3	U	82.7
4Q07	54-01023	247	Butanone[2-]	µg/m^3	2.5	5	—	2.6	2.6	U	63.2
1Q07	54-15461	60	Tetrachloroethene	µg/m^3	1.4	7.7	—	1.4	1.5	—	135
1Q07	54-15461	60	Carbon Disulfide	µg/m^3	3.1	15	—	3.1	3.1	U	131
1Q07	54-15461	60	Trichloroethene	µg/m^3	1.1	1.7	—	1.1	1.1	U	42.9

[a] — = The analyte was detected and unqualified.

[b] (J) and other data qualifiers are defined in Table A-1.0-2.

Appendix B

Analytical Data
(on CD included with this document)

Appendix C

Moisture Monitoring Data

C-1.0 INTRODUCTION

Before the third quarter of fiscal year (FY) 2006, volumetric water content was calculated using standard equations for 5-in.- and 9-in.-diameter uncased boreholes in Bandelier Tuff (LANL 1999, 090803). The percentage of moisture for boreholes 54-15462 and 54-15461 was calculated using the formula $(0.00008 \times \text{CPS}^{1.537}) \times 100$, whereas the percentage of moisture for borehole 54-01023 was calculated using the formula $(0.0002 \times \text{CPS}^{1.3404}) \times 100$, where CPS is counts per second from a neutron probe.

Since the third quarter of FY2006, water content monitoring has been conducted using Mount Sopris Matrix data logger. Use of this data logger modified neutron probe moisture calibrations. Volumetric water content in instrumented boreholes 54-15461 and 54-15462 was calculated using the formula $(0.0000115 \times \text{CPS}^{1.537}) \times 100$, whereas the percentage of moisture for borehole 54-01023 was calculated using the formula $(0.0000225 \times \text{CPS}^{1.3404}) \times 100$. Tables C-1.0-1, C-1.0-2, and C-1.0-3 present the neutron-activation moisture results generated for boreholes 54-01023, 54-15461, and 54-15462, respectively, collected during FY2007. These volumetric moisture results were generated using the revised, unverified calibrations.

C-2.0 REFERENCE

The following list includes all documents cited in this appendix. Parenthetical information following each reference provides the author(s), publication date, and ER ID number. This information is also included in text citations. ER ID numbers are assigned by the Environmental Programs Directorate's Records Processing Facility (RPF) and are used to locate the document at the RPF and, where applicable, in the master reference set.

Copies of the master reference set are maintained at the NMED Hazardous Waste Bureau; the U.S. Department of Energy–Los Alamos Site Office; the U.S. Environmental Protection Agency, Region 6; and the Directorate. The set was developed to ensure that the administrative authority has all material needed to review this document, and it is updated with every document submitted to the administrative authority. Documents previously submitted to the administrative authority are not included.

LANL (Los Alamos National Laboratory), November 1999. "Subsurface Moisture Measurements Using Neutron Probes," Facilities and Waste Operations–Waste Facility Management document DOP-FMU64-023, Los Alamos National Laboratory, Los Alamos, New Mexico. (LANL 1999, 090803)

Table C-1.0-1
54-01023 Neutron-Activation Moisture Results during Second and Third Quarter FY2007

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
1.1	498.6	15.7
1.5	722.1	25.8
1.8	721.4	25.8
2.1	983.0	39.0
2.4	1092.1	44.9
2.8	1135.5	47.3
3.1	1138.7	47.5
3.4	1094.2	45.0
3.8	993.2	39.5
4.1	806.2	29.9
4.4	813.8	30.3
4.7	771.8	28.2
5.1	742.2	26.8
5.4	647.9	22.3
5.7	653.2	22.5
6.0	640.0	21.9
6.4	580.0	19.2
6.7	597.5	20.0
7.0	602.7	20.2
7.4	604.9	20.3
7.7	622.2	21.1
8.0	643.2	22.1
8.3	545.8	17.7
8.7	535.7	17.3
9.0	591.1	19.7
9.3	507.1	16.1
9.6	634.1	21.7
10.0	608.6	20.5
10.3	592.2	19.8
10.6	589.9	19.7
11.0	513.9	16.3
11.3	508.2	16.1
11.6	487.4	15.2
11.9	461.6	14.2
12.3	445.9	13.5
12.9	457.0	14.0
13.2	418.6	12.4

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
0.3	277.3	7.1
0.6	466.3	14.4
0.9	513.3	16.3
1.2	542.7	17.6
1.6	639.2	21.9
1.9	648.1	22.3
2.2	674.5	23.5
2.6	682.7	23.9
2.9	641.6	22.0
3.2	615.1	20.8
3.9	537.0	17.3
4.2	547.3	17.8
4.5	519.7	16.6
4.8	484.9	15.1
5.2	492.9	15.5
5.5	473.5	14.6
5.8	429.6	12.9
6.2	429.2	12.8
6.5	448.1	13.6
6.8	473.2	14.6
7.1	449.2	13.6
7.5	460.8	14.1
7.8	464.6	14.3
8.1	415.9	12.3
8.4	411.6	12.1
8.8	435.7	13.1
9.1	414.2	12.2
9.4	443.0	13.4
9.8	445.1	13.5
10.1	446.8	13.5
10.4	401.1	11.7
11.1	314.9	8.5
11.4	332.3	9.1
11.7	326.4	8.9
12.0	359.5	10.1
12.4	325.9	8.9
12.7	305.3	8.1

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
13.6	391.1	11.3
13.9	351.8	9.8
14.2	350.3	9.8
14.6	373.4	10.7
14.9	340.0	9.4
15.2	337.8	9.3
15.5	360.5	10.2
15.9	337.8	9.3
16.2	328.4	9.0
16.5	340.0	9.4
16.8	363.8	10.3
17.2	372.4	10.6
17.5	334.1	9.2
17.8	344.2	9.6
18.2	365.1	10.3
18.5	431.3	12.9
18.8	424.4	12.6
19.1	467.7	14.4
19.5	447.4	13.6
19.8	427.5	12.8
20.1	423.1	12.6
20.4	446.7	13.5
20.8	392.3	11.4
21.1	430.7	12.9
21.4	432.5	13.0
21.8	421.9	12.5
22.1	472.5	14.6
22.4	501.6	15.8
22.7	485.3	15.1
23.1	533.7	17.2
23.4	512.5	16.3
23.7	494.5	15.5
24.0	510.7	16.2
24.4	518.9	16.6
24.7	495.0	15.5
25.0	454.9	13.9
25.7	490.4	15.4
26.0	488.9	15.3

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
13.0	310.7	8.3
13.4	288.6	7.5
13.7	295.4	7.8
14.0	272.7	7.0
14.3	268.6	6.9
14.7	267.2	6.8
15.0	278.4	7.2
15.3	275.9	7.1
15.6	296.5	7.8
16.0	300.0	7.9
16.3	314.1	8.5
16.6	302.7	8.0
17.0	292.2	7.7
17.3	290.4	7.6
17.6	316.3	8.5
17.9	323.6	8.8
18.3	354.2	9.9
18.6	343.6	9.5
18.9	339.7	9.4
19.3	333.2	9.1
19.6	324.5	8.8
19.9	339.2	9.4
20.2	333.4	9.2
20.6	316.9	8.6
20.9	326.7	8.9
21.2	382.8	11.0
21.5	379.0	10.9
21.9	385.5	11.1
22.2	387.8	11.2
22.5	386.1	11.1
22.9	382.6	11.0
23.2	388.9	11.3
23.5	379.2	10.9
23.8	368.3	10.5
24.2	387.6	11.2
24.5	366.8	10.4
24.8	367.3	10.4
25.1	403.2	11.8

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
26.3	475.7	14.7
26.7	490.9	15.4
27.0	467.5	14.4
27.3	428.2	12.8
27.6	424.7	12.7
28.0	425.6	12.7
28.6	431.3	12.9
29.0	407.1	12.0
29.3	385.0	11.1
29.6	383.2	11.0
29.9	383.4	11.0
30.3	398.7	11.6
30.6	383.7	11.0
30.9	383.7	11.1
31.2	379.2	10.9
31.6	372.3	10.6
31.9	353.2	9.9
32.2	411.8	12.1
32.6	396.5	11.5
32.9	380.0	10.9
33.2	357.6	10.1
33.5	360.0	10.1
33.9	346.8	9.7
34.2	406.1	11.9
34.5	371.6	10.6
34.8	346.1	9.6
35.2	264.8	6.7
35.5	226.6	5.5
35.8	200.8	4.6
36.2	165.9	3.6
36.5	195.8	4.5
36.8	198.2	4.6
37.1	223.7	5.4
37.5	238.7	5.8
37.8	235.3	5.7
38.1	236.1	5.8
38.4	163.2	3.5
38.8	188.7	4.3

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
25.5	340.0	9.4
25.8	330.9	9.1
26.1	360.3	10.2
26.5	333.2	9.1
26.8	327.6	8.9
27.4	328.4	9.0
27.8	318.2	8.6
28.1	320.5	8.7
28.4	334.5	9.2
28.7	322.9	8.8
29.1	331.3	9.1
29.4	315.0	8.5
29.7	303.7	8.1
30.1	289.3	7.6
30.4	302.1	8.0
30.7	280.5	7.3
31.0	287.1	7.5
31.4	297.4	7.9
31.7	293.3	7.7
32.0	291.3	7.6
32.3	293.7	7.7
32.7	283.7	7.4
33.0	310.8	8.3
33.3	303.7	8.1
33.7	307.4	8.2
34.0	280.8	7.3
34.3	224.5	5.4
34.6	207.4	4.8
35.0	183.2	4.1
35.3	175.8	3.9
35.6	173.4	3.8
35.9	175.8	3.9
36.3	175.0	3.9
36.6	211.2	5.0
36.9	208.9	4.9
37.3	173.2	3.8
37.6	163.4	3.5
37.9	176.3	3.9

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
39.1	162.6	3.5
39.4	176.5	3.9
39.8	176.3	3.9
40.1	167.5	3.6
40.4	170.3	3.7
40.7	183.7	4.1
41.1	185.8	4.2
41.4	166.4	3.6
41.7	177.4	3.9
42.0	190.8	4.3
42.4	197.9	4.5
42.7	159.2	3.4
43.0	184.2	4.1
43.4	212.9	5.0
43.7	193.9	4.4
44.0	200.8	4.6
44.3	212.1	5.0
44.7	211.8	5.0
45.0	186.5	4.2
45.3	181.3	4.0
45.6	192.9	4.4
46.0	190.0	4.3
46.3	208.2	4.9
46.6	205.9	4.8
47.0	190.9	4.3
47.3	175.8	3.9
47.6	211.3	5.0
47.9	193.2	4.4
48.3	204.2	4.7
48.6	177.1	3.9
48.9	191.9	4.4
49.2	198.7	4.6
49.6	204.9	4.8
49.9	203.9	4.7
50.2	189.0	4.3
50.6	201.9	4.7
50.9	185.7	4.2
51.2	211.6	5.0

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
38.2	157.6	3.4
38.6	145.3	3.0
38.9	172.4	3.8
39.2	177.1	3.9
39.5	167.5	3.6
39.9	166.8	3.6
40.2	166.5	3.6
40.5	190.3	4.3
40.9	183.7	4.1
41.2	181.8	4.1
41.5	184.9	4.2
41.8	180.8	4.0
42.2	190.1	4.3
42.5	158.7	3.4
42.8	174.5	3.8
43.1	197.1	4.5
43.5	187.5	4.2
43.8	173.7	3.8
44.1	183.4	4.1
44.5	181.3	4.0
44.8	181.3	4.0
45.1	177.1	3.9
45.4	179.5	4.0
45.8	185.5	4.2
46.1	176.9	3.9
46.4	190.8	4.3
46.7	188.1	4.2
47.1	186.0	4.2
47.4	172.7	3.8
47.7	187.6	4.2
48.1	193.2	4.4
48.4	166.4	3.6
48.7	176.4	3.9
49.0	193.5	4.4
49.4	181.8	4.1
49.7	196.6	4.5
50.0	189.1	4.3
50.3	199.2	4.6

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
51.5	214.4	5.1
51.9	223.2	5.3
52.2	215.4	5.1
52.5	210.8	5.0
52.9	224.5	5.4
53.2	188.8	4.3
53.5	198.4	4.6
53.8	230.1	5.6
54.2	210.8	5.0
54.5	240.5	5.9
54.8	226.7	5.5
55.1	231.1	5.6
55.5	244.3	6.0
55.8	233.8	5.7
56.1	238.1	5.8
56.5	226.2	5.4
56.8	224.5	5.4
57.1	234.9	5.7
57.4	223.5	5.4
57.8	234.6	5.7
58.1	226.2	5.4
58.4	204.8	4.8
58.7	256.8	6.5
59.1	243.0	6.0
59.4	241.9	6.0
59.7	236.5	5.8
60.1	264.6	6.7
60.4	240.5	5.9
60.7	218.9	5.2
61.0	241.1	5.9
61.4	234.1	5.7
61.7	277.1	7.1
62.3	267.0	6.8
62.7	263.0	6.7
63.0	271.2	6.9
63.3	282.1	7.3
63.7	288.4	7.5
64.0	269.9	6.9

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
50.7	197.2	4.5
51.0	192.7	4.4
51.3	189.6	4.3
51.7	207.8	4.9
52.0	200.3	4.6
52.3	188.6	4.3
52.6	189.1	4.3
53.0	197.4	4.5
53.3	186.7	4.2
53.6	192.8	4.4
53.9	197.7	4.5
54.3	190.0	4.3
54.6	207.7	4.9
54.9	217.2	5.2
55.3	192.4	4.4
55.6	226.1	5.4
55.9	228.9	5.5
56.2	222.8	5.3
56.6	206.3	4.8
56.9	225.9	5.4
57.2	196.7	4.5
57.5	212.9	5.0
57.9	224.6	5.4
58.2	215.7	5.1
58.5	225.6	5.4
58.9	204.8	4.8
59.2	233.8	5.7
59.5	203.8	4.7
59.8	214.9	5.1
60.2	209.1	4.9
60.5	212.4	5.0
60.8	218.7	5.2
61.1	232.7	5.7
61.5	214.0	5.1
61.8	216.7	5.1
62.1	226.8	5.5
62.5	256.7	6.4
62.8	237.2	5.8

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
64.3	265.6	6.7
64.6	256.8	6.5
65.0	287.7	7.5
65.3	272.8	7.0
65.6	267.5	6.8
65.9	305.6	8.1
66.3	302.7	8.0
66.6	269.6	6.9
67.3	269.5	6.9
67.6	288.5	7.5
67.9	273.3	7.0
68.6	276.3	7.1
68.9	318.6	8.6
69.2	297.6	7.9
69.5	289.1	7.6
69.9	305.3	8.1
70.2	267.7	6.8
70.5	294.9	7.8
70.9	314.1	8.5
71.2	289.3	7.6
71.5	313.0	8.4
71.8	290.8	7.6
72.2	336.8	9.3
72.5	295.5	7.8
72.8	284.5	7.4
73.1	291.8	7.7
73.5	299.5	7.9
73.8	286.8	7.5
74.1	285.3	7.4
74.5	286.8	7.5
74.8	291.1	7.6
75.1	323.7	8.8
75.4	310.7	8.3
75.8	290.0	7.6
76.1	292.0	7.7
76.4	298.2	7.9
76.7	311.8	8.4
77.1	315.5	8.5

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
63.1	244.0	6.0
63.4	247.2	6.1
63.8	242.3	6.0
64.1	232.7	5.7
64.4	225.1	5.4
64.7	224.6	5.4
65.1	231.9	5.6
65.4	244.1	6.0
65.7	254.2	6.4
66.1	249.2	6.2
66.4	259.0	6.5
66.7	237.8	5.8
67.0	238.7	5.8
67.4	248.7	6.2
67.7	248.4	6.2
68.0	271.5	7.0
68.3	243.8	6.0
68.7	228.1	5.5
69.0	243.8	6.0
69.3	249.6	6.2
69.7	236.0	5.8
70.0	248.1	6.2
70.3	254.1	6.4
70.6	247.5	6.1
71.0	233.5	5.7
71.3	269.1	6.9
71.6	237.7	5.8
71.9	248.1	6.2
72.3	248.4	6.2
72.6	241.5	5.9
72.9	251.6	6.3
73.3	283.0	7.3
73.6	246.6	6.1
73.9	229.9	5.6
74.2	241.3	5.9
74.6	217.2	5.2
74.9	249.2	6.2
75.2	252.4	6.3

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
77.4	326.9	8.9
77.7	299.2	7.9
78.1	298.1	7.9
78.4	280.5	7.3
78.7	314.2	8.5
79.0	306.3	8.2
79.4	333.9	9.2
79.7	310.5	8.3
80.0	284.7	7.4
80.3	281.8	7.3
80.7	319.7	8.7
81.0	299.7	7.9
81.3	328.6	9.0
81.7	283.4	7.4
82.0	280.8	7.3
82.3	307.5	8.2
82.6	305.0	8.1
83.0	328.5	9.0
83.3	290.5	7.6
83.6	301.0	8.0
83.9	327.4	8.9
84.6	282.3	7.3
84.9	297.4	7.9
85.3	307.2	8.2
85.6	326.5	8.9
85.9	305.9	8.2
86.2	306.0	8.2
86.6	297.1	7.8
86.9	298.7	7.9
87.2	296.1	7.8
87.5	292.7	7.7
87.9	266.4	6.8
88.2	287.7	7.5
88.5	300.0	7.9
88.9	311.0	8.3
89.2	302.4	8.0
89.5	289.0	7.6
89.8	292.6	7.7

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
75.5	260.0	6.6
75.9	263.5	6.7
76.2	246.8	6.1
76.5	271.4	6.9
76.9	248.6	6.2
77.2	258.3	6.5
77.5	282.8	7.3
77.8	265.5	6.7
78.2	252.0	6.3
78.5	249.6	6.2
78.8	252.2	6.3
79.1	262.0	6.6
79.5	250.1	6.2
79.8	258.5	6.5
80.1	249.0	6.2
80.5	261.8	6.6
80.8	250.3	6.2
81.1	258.9	6.5
81.4	259.0	6.5
81.8	266.1	6.8
82.1	257.8	6.5
82.4	254.0	6.4
82.7	249.0	6.2
83.1	243.5	6.0
83.4	263.3	6.7
83.7	230.1	5.6
84.1	243.3	6.0
84.4	267.3	6.8
84.7	271.7	7.0
85.0	274.2	7.0
85.4	267.8	6.8
85.7	251.7	6.3
86.0	266.1	6.8
86.4	270.8	6.9
86.7	243.9	6.0
87.0	261.7	6.6
87.3	279.5	7.2
87.7	276.9	7.1

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
90.2	259.0	6.5
90.5	284.1	7.4
90.8	260.5	6.6
91.1	283.9	7.4
91.5	314.4	8.5
91.8	289.5	7.6
92.1	286.9	7.5
92.5	270.6	6.9
92.8	284.1	7.4
93.1	261.3	6.6
93.4	260.8	6.6
93.8	257.4	6.5
94.1	258.7	6.5
94.4	266.9	6.8
94.7	258.5	6.5
95.1	274.3	7.0
95.4	259.7	6.5
95.7	274.8	7.1
96.1	292.5	7.7
96.4	270.0	6.9
96.7	253.5	6.3
97.0	261.3	6.6
97.4	251.3	6.3
97.7	289.9	7.6
98.0	259.2	6.5
98.3	252.3	6.3
98.7	261.3	6.6
99.0	261.0	6.6
99.3	269.9	6.9
99.7	274.5	7.1
100.0	287.3	7.5
100.3	234.5	5.7
100.6	280.3	7.3
101.0	241.0	5.9
101.3	235.3	5.7
101.6	285.0	7.4
101.9	233.3	5.7
102.3	241.8	6.0

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
88.0	270.4	6.9
88.3	250.4	6.2
88.6	249.5	6.2
89.0	227.9	5.5
89.3	270.6	6.9
89.6	260.5	6.6
90.0	244.1	6.0
90.3	237.6	5.8
90.6	237.3	5.8
90.9	229.6	5.6
91.3	246.6	6.1
91.6	235.3	5.7
91.9	246.6	6.1
92.2	247.2	6.1
92.6	250.3	6.2
92.9	253.6	6.3
93.2	229.1	5.5
93.6	210.6	4.9
93.9	233.8	5.7
94.2	236.8	5.8
94.5	231.9	5.6
94.9	222.0	5.3
95.2	246.5	6.1
95.5	219.0	5.2
95.8	248.4	6.2
96.2	206.4	4.8
96.5	233.6	5.7
96.8	245.5	6.1
97.2	232.5	5.6
97.5	228.0	5.5
97.8	209.6	4.9
98.1	243.7	6.0
98.5	222.8	5.3
98.8	218.0	5.2
99.1	239.0	5.9
99.4	232.3	5.6
100.1	227.0	5.5
100.4	230.0	5.6

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
102.6	255.4	6.4
102.9	253.2	6.3
103.3	243.6	6.0
103.6	279.2	7.2
103.9	279.0	7.2
104.2	289.9	7.6
104.6	274.3	7.0
104.9	236.9	5.8
105.2	267.3	6.8
105.5	254.5	6.4
105.9	250.4	6.2
106.2	245.7	6.1
106.5	229.9	5.6
106.9	249.3	6.2
107.2	249.0	6.2
107.5	252.9	6.3
107.8	239.0	5.9
108.2	279.2	7.2
108.5	254.3	6.4
108.8	243.4	6.0
109.1	259.5	6.5
109.5	269.1	6.9
109.8	279.5	7.2
110.1	251.9	6.3
110.5	239.7	5.9
110.8	273.0	7.0
111.1	250.1	6.2
111.4	265.2	6.7
111.8	245.6	6.1
112.1	274.0	7.0
112.4	259.0	6.5
112.7	258.4	6.5
113.1	248.5	6.2
113.4	262.3	6.6
113.7	285.9	7.4
114.1	263.1	6.7
114.4	264.4	6.7
114.7	292.1	7.7

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
100.8	238.8	5.9
101.1	219.3	5.2
101.4	219.7	5.2
101.7	219.0	5.2
102.1	213.2	5.0
102.4	231.4	5.6
102.7	219.3	5.2
103.0	232.2	5.6
103.4	232.7	5.7
103.7	238.5	5.8
104.0	195.7	4.5
104.4	217.5	5.2
104.7	223.0	5.3
105.0	229.3	5.5
105.3	209.0	4.9
105.7	200.5	4.6
106.0	205.1	4.8
106.3	203.0	4.7
106.6	208.3	4.9
107.0	223.8	5.4
107.3	227.8	5.5
107.6	230.6	5.6
108.0	219.2	5.2
108.3	223.8	5.4
108.6	235.8	5.8
108.9	219.8	5.2
109.3	219.0	5.2
109.6	245.3	6.1
109.9	221.8	5.3
110.2	207.0	4.8
110.6	238.5	5.8
110.9	227.7	5.5
111.2	227.8	5.5
111.6	238.8	5.9
111.9	239.0	5.9
112.2	221.0	5.3
112.5	242.5	6.0
112.9	229.3	5.5

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
115.0	263.4	6.7
115.4	291.5	7.6
115.7	290.1	7.6
116.0	319.2	8.6
116.4	292.1	7.7
116.7	258.4	6.5
117.0	286.2	7.5
117.3	291.4	7.6
117.7	328.7	9.0
118.0	263.6	6.7
118.3	301.5	8.0
118.6	301.1	8.0
119.0	310.3	8.3
119.3	289.5	7.6
119.6	307.3	8.2
120.0	313.8	8.4
120.3	300.3	8.0
120.6	340.3	9.4
120.9	319.5	8.6
121.3	292.3	7.7
121.6	310.9	8.3
121.9	329.5	9.0
122.2	335.4	9.2
122.6	334.1	9.2
122.9	375.9	10.7
123.2	342.8	9.5
123.6	345.6	9.6
123.9	353.1	9.9
124.2	331.8	9.1
124.5	349.0	9.7
124.9	343.3	9.5
125.2	326.0	8.9
125.5	367.1	10.4
125.8	366.5	10.4
126.2	402.6	11.8
126.5	399.0	11.6
126.8	347.4	9.7
127.2	384.6	11.1

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
113.2	235.8	5.8
113.5	239.8	5.9
113.8	220.8	5.3
114.2	246.9	6.1
114.5	238.7	5.8
114.8	223.3	5.3
115.2	231.3	5.6
115.5	244.7	6.0
115.8	234.3	5.7
116.1	246.6	6.1
116.5	245.8	6.1
116.8	261.0	6.6
117.1	264.3	6.7
117.4	272.5	7.0
117.8	255.5	6.4
118.1	254.0	6.4
118.4	259.8	6.6
118.8	276.8	7.1
119.1	264.0	6.7
119.4	256.3	6.4
119.7	266.0	6.8
120.1	249.3	6.2
120.4	289.4	7.6
120.7	289.4	7.6
121.0	283.0	7.3
121.4	281.8	7.3
121.7	251.3	6.3
122.0	286.7	7.5
122.4	305.8	8.2
122.7	274.6	7.1
123.0	291.8	7.7
123.3	305.9	8.2
123.7	302.8	8.0
124.0	278.5	7.2
124.3	288.1	7.5
124.6	289.8	7.6
125.0	305.5	8.1
125.3	288.3	7.5

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
127.5	400.5	11.7
127.8	358.7	10.1
128.1	396.1	11.5
128.5	420.0	12.5
128.8	405.5	11.9
129.1	428.7	12.8
129.4	454.6	13.9
129.8	455.6	13.9
130.4	449.4	13.7
130.8	457.9	14.0
131.1	483.1	15.0
131.4	446.2	13.5
131.7	451.3	13.7
132.1	445.4	13.5
132.4	472.5	14.6
132.7	434.6	13.1
133.0	451.2	13.7
133.4	468.1	14.4
133.7	476.2	14.8
134.0	461.8	14.2
134.4	518.7	16.6
134.7	491.7	15.4
135.0	523.8	16.8
135.3	533.3	17.2
135.7	527.9	16.9
136.0	556.9	18.2
136.3	512.6	16.3
136.6	500.3	15.8
137.0	562.6	18.5
137.3	599.0	20.1
137.6	601.3	20.2
138.0	592.6	19.8
138.3	589.0	19.6
138.6	628.1	21.4
138.9	610.4	20.6
139.3	626.7	21.3
139.6	595.6	19.9
139.9	595.6	19.9

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
125.6	286.6	7.5
126.0	315.6	8.5
126.3	303.4	8.1
126.6	324.8	8.8
126.9	310.5	8.3
127.3	326.4	8.9
127.6	338.1	9.3
127.9	330.7	9.1
128.2	334.5	9.2
128.6	350.8	9.8
128.9	348.6	9.7
129.2	345.2	9.6
129.6	368.6	10.5
129.9	357.5	10.1
130.2	367.3	10.4
130.5	380.8	10.9
130.9	368.9	10.5
131.2	369.7	10.5
131.5	357.3	10.0
131.8	377.3	10.8
132.2	358.9	10.1
132.5	380.5	10.9
132.8	380.5	10.9
133.2	404.5	11.9
133.5	374.8	10.7
133.8	414.6	12.3
134.1	365.1	10.3
134.5	418.1	12.4
134.8	419.7	12.5
135.1	407.4	12.0
135.4	410.7	12.1
135.8	437.9	13.2
136.1	436.0	13.1
136.4	429.1	12.8
136.8	433.6	13.0
137.1	443.5	13.4
137.4	475.8	14.7
137.7	478.7	14.9

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
140.2	635.1	21.7
140.6	698.2	24.7
140.9	666.2	23.1
141.2	689.9	24.3
141.6	689.7	24.3
141.9	677.9	23.7
142.2	701.8	24.8
142.5	722.5	25.8
142.9	693.3	24.4
143.2	745.1	26.9
143.5	741.5	26.7
143.8	701.3	24.8
144.2	729.5	26.1
144.5	711.6	25.3
144.8	767.3	28.0
145.2	732.2	26.3
145.5	743.8	26.8
145.8	750.6	27.2
146.1	741.8	26.7
146.5	840.5	31.6
146.8	871.6	33.2
147.1	974.1	38.5
147.4	1032.0	41.6
147.8	1097.3	45.2
148.1	1108.9	45.8
148.4	1150.1	48.1
148.8	1130.6	47.0
149.1	1092.8	44.9
149.4	1113.2	46.1
149.7	1059.8	43.1
150.1	1086.1	44.6
150.4	953.4	37.4
150.7	971.3	38.4
151.0	960.3	37.8
151.4	856.2	32.4
151.7	902.3	34.8
152.0	820.3	30.6
152.4	793.8	29.3

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
138.1	454.1	13.9
138.4	482.4	15.0
138.7	507.7	16.1
139.0	503.2	15.9
139.4	477.9	14.8
139.7	510.4	16.2
140.0	530.4	17.1
140.4	531.8	17.1
140.7	530.0	17.0
141.0	535.5	17.3
141.3	533.9	17.2
141.7	523.4	16.8
142.0	507.2	16.1
142.3	546.1	17.7
142.6	549.6	17.9
143.0	585.9	19.5
143.3	574.1	19.0
143.6	566.4	18.6
144.0	564.3	18.5
144.3	579.5	19.2
144.6	569.5	18.8
144.9	561.6	18.4
145.3	567.7	18.7
145.6	592.0	19.8
145.9	640.0	21.9
146.2	698.4	24.7
146.6	722.6	25.8
146.9	714.5	25.4
147.2	745.2	26.9
147.6	832.5	31.2
147.9	808.9	30.0
148.2	829.4	31.0
148.5	786.2	28.9
148.9	766.1	27.9
149.2	781.5	28.7
149.5	731.8	26.3
149.9	681.3	23.9
150.2	743.4	26.8

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
152.7	773.4	28.3
153.0	691.5	24.3
153.3	676.7	23.6
153.7	663.3	23.0
154.0	623.0	21.2
154.3	692.8	24.4
154.6	617.0	20.9
155.0	632.2	21.6
155.3	667.1	23.2
155.6	676.8	23.6
156.0	672.7	23.5
156.3	628.9	21.4
156.6	590.4	19.7
157.3	633.2	21.6
157.6	575.3	19.0
157.9	579.5	19.2
158.2	570.9	18.8
158.6	602.5	20.2
158.9	538.0	17.4
159.2	597.4	20.0
159.6	523.3	16.7
159.9	528.9	17.0
160.2	570.3	18.8
160.5	564.1	18.5
160.9	585.5	19.5
161.2	519.2	16.6
161.5	557.8	18.2
161.8	493.7	15.5
162.2	530.7	17.1
162.5	557.0	18.2
162.8	531.0	17.1
163.2	558.6	18.3
163.5	520.8	16.6
163.8	517.5	16.5
164.1	527.8	16.9
164.5	559.2	18.3
164.8	523.6	16.8
165.1	524.9	16.8

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
150.5	670.6	23.4
150.8	647.4	22.3
151.2	617.1	20.9
151.5	606.1	20.4
151.8	611.7	20.6
152.1	557.6	18.2
152.5	532.3	17.1
152.8	504.3	15.9
153.1	487.7	15.2
153.5	485.9	15.2
153.8	512.0	16.3
154.1	514.9	16.4
154.4	517.6	16.5
154.8	504.2	15.9
155.1	526.7	16.9
155.4	485.9	15.2
155.7	503.5	15.9
156.1	484.9	15.1
156.4	512.9	16.3
156.7	467.2	14.4
157.1	470.3	14.5
157.4	417.6	12.4
157.7	443.7	13.4
158.0	466.4	14.4
158.4	451.9	13.8
158.7	409.3	12.1
159.0	453.9	13.8
159.3	448.4	13.6
159.7	421.4	12.5
160.0	442.1	13.4
160.3	448.4	13.6
160.7	430.7	12.9
161.0	442.7	13.4
161.3	450.8	13.7
161.6	455.7	13.9
162.0	439.5	13.3
162.3	421.6	12.5
162.6	402.6	11.8

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
165.4	522.7	16.7
165.8	531.8	17.1
166.1	542.4	17.6
166.4	493.4	15.5
166.8	522.7	16.7
167.1	511.6	16.3
167.4	507.6	16.1
167.7	520.8	16.6
168.1	541.1	17.5
168.4	548.4	17.8
168.7	530.5	17.1
169.0	526.6	16.9
169.4	521.4	16.7
169.7	540.8	17.5
170.0	531.2	17.1
170.4	508.6	16.1
170.7	517.8	16.5
171.0	547.1	17.8
171.3	563.6	18.5
171.7	486.8	15.2
172.0	566.3	18.6
172.3	542.2	17.6
172.6	524.9	16.8
173.0	533.4	17.2
173.3	506.2	16.0
173.6	544.1	17.6
174.0	565.8	18.6
174.3	540.5	17.5
174.6	515.9	16.4
174.9	558.1	18.3
175.3	516.4	16.5
175.9	550.7	17.9
176.2	524.1	16.8
176.6	539.2	17.4
176.9	533.0	17.2
177.2	552.4	18.0
177.6	527.0	16.9
177.9	530.3	17.0

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
162.9	422.6	12.6
163.3	432.9	13.0
163.6	439.2	13.2
163.9	410.4	12.1
164.3	426.8	12.7
164.6	406.2	11.9
164.9	438.4	13.2
165.2	415.0	12.3
165.6	425.3	12.7
165.9	414.5	12.3
166.2	423.2	12.6
166.5	408.6	12.0
166.9	423.1	12.6
167.2	426.6	12.7
167.5	449.7	13.7
167.9	437.9	13.2
168.2	411.7	12.1
168.5	419.7	12.5
168.8	441.0	13.3
169.2	426.3	12.7
169.5	415.5	12.3
169.8	421.8	12.5
170.1	438.9	13.2
170.5	429.5	12.9
170.8	395.1	11.5
171.1	427.4	12.8
171.5	445.3	13.5
171.8	401.6	11.7
172.1	399.2	11.7
172.4	438.9	13.2
172.8	440.3	13.3
173.1	425.5	12.7
173.4	437.6	13.2
174.1	449.5	13.7
174.4	421.3	12.5
174.7	433.9	13.0
175.1	413.9	12.2
175.4	457.4	14.0

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
178.2	566.6	18.6
178.5	537.8	17.4
178.9	595.1	19.9
179.2	557.3	18.2
179.5	565.4	18.6
179.8	558.1	18.3
180.2	588.6	19.6
180.5	563.0	18.5
180.8	551.9	18.0
181.2	575.1	19.0
181.5	569.0	18.7
181.8	538.7	17.4
182.1	558.9	18.3
182.5	565.7	18.6
182.8	590.5	19.7
183.1	537.0	17.3
183.5	575.5	19.0
183.8	586.4	19.5
184.1	548.4	17.8
184.4	605.3	20.4
184.8	598.4	20.0
185.1	610.3	20.6
185.7	578.4	19.2
186.1	541.6	17.5
186.4	616.8	20.9
186.7	634.3	21.7
187.1	625.3	21.3
187.4	668.1	23.2
187.7	659.2	22.8
188.0	668.9	23.3
188.4	703.7	24.9
188.7	666.8	23.2
189.0	736.0	26.5
189.3	717.8	25.6
189.7	761.1	27.7
190.0	689.1	24.2
190.3	691.2	24.3
190.7	703.2	24.9

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
175.7	426.5	12.7
176.0	434.7	13.1
176.4	480.0	14.9
176.7	470.5	14.5
177.0	435.0	13.1
177.3	430.4	12.9
177.7	482.9	15.0
178.0	447.4	13.6
178.3	447.6	13.6
178.7	446.1	13.5
179.0	437.7	13.2
179.3	428.7	12.8
179.6	432.2	13.0
180.0	434.1	13.0
180.3	432.6	13.0
180.6	456.9	14.0
180.9	472.5	14.6
181.3	437.1	13.2
181.6	472.4	14.6
181.9	469.9	14.5
182.3	462.3	14.2
182.6	453.2	13.8
182.9	487.0	15.2
183.2	448.4	13.6
183.6	484.7	15.1
183.9	481.3	15.0
184.2	461.3	14.1
184.5	460.5	14.1
184.9	506.9	16.1
185.2	485.1	15.1
185.5	509.1	16.1
185.9	500.3	15.8
186.2	479.0	14.9
186.5	480.8	15.0
186.8	540.0	17.5
187.2	546.5	17.8
187.5	535.3	17.3
187.8	524.4	16.8

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
191.0	693.5	24.4
191.3	709.5	25.2
191.6	740.5	26.7
192.0	660.8	22.9
192.3	700.0	24.7
192.6	697.3	24.6
192.9	654.7	22.6
193.3	677.3	23.7
193.6	702.4	24.9
193.9	672.7	23.5
194.3	678.4	23.7
194.6	648.3	22.3
194.9	614.4	20.8
195.2	687.5	24.1
195.6	665.1	23.1
195.9	688.0	24.2
196.2	649.3	22.4
196.5	667.5	23.2
196.9	693.3	24.4
197.2	661.3	22.9
197.5	670.4	23.3
197.9	683.2	23.9
198.2	661.6	22.9
198.5	679.7	23.8
198.8	701.1	24.8
199.2	704.8	25.0
199.5	707.5	25.1
199.8	647.2	22.3
200.1	672.8	23.5
200.5	725.6	26.0
200.8	677.9	23.7
201.1	630.7	21.5
201.5	661.1	22.9
201.8	703.9	24.9
202.1	668.3	23.2
202.4	638.9	21.9
202.8	666.9	23.2
203.1	686.1	24.1

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
188.1	522.9	16.7
188.5	595.6	19.9
188.8	576.3	19.1
189.1	560.0	18.3
189.5	566.2	18.6
189.8	582.9	19.4
190.1	536.8	17.3
190.4	589.1	19.6
190.8	561.3	18.4
191.1	570.4	18.8
191.4	570.5	18.8
191.7	574.3	19.0
192.1	569.9	18.8
192.4	566.8	18.6
192.7	541.8	17.5
193.1	548.9	17.9
193.4	549.4	17.9
193.7	562.6	18.5
194.0	550.6	17.9
194.4	544.4	17.7
194.7	569.1	18.7
195.0	555.5	18.1
195.3	509.7	16.2
195.7	513.8	16.3
196.0	535.3	17.3
196.3	515.1	16.4
196.7	529.9	17.0
197.0	548.3	17.8
197.3	512.1	16.3
197.6	544.2	17.7
198.0	550.9	17.9
198.3	548.3	17.8
198.6	573.0	18.9
198.9	598.4	20.0
199.3	522.6	16.7
199.6	540.3	17.5
199.9	526.0	16.9
200.3	548.4	17.8

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
203.4	700.3	24.7
203.7	738.4	26.6
204.1	714.9	25.4
204.4	720.5	25.7
204.7	701.8	24.8
205.1	681.1	23.8
205.4	661.8	22.9
205.7	655.0	22.6
206.0	697.1	24.6
206.4	649.9	22.4
206.7	644.2	22.1
207.0	656.8	22.7
207.3	666.2	23.2
207.7	703.9	24.9
208.0	667.6	23.2
208.3	635.0	21.7
208.7	623.4	21.2
209.0	708.4	25.1
209.3	693.5	24.4
209.6	659.5	22.8
210.0	628.8	21.4
210.3	639.5	21.9
210.6	674.8	23.6
210.9	708.9	25.2
211.3	632.9	21.6
211.6	623.4	21.2
211.9	666.0	23.1
212.3	646.1	22.2
212.6	665.5	23.1
212.9	623.2	21.2
213.6	660.0	22.9
213.9	648.9	22.3
214.2	652.1	22.5
214.5	660.8	22.9
214.9	668.9	23.3
215.2	647.6	22.3
215.5	626.8	21.3
215.9	608.6	20.5

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
200.6	548.1	17.8
200.9	523.7	16.8
201.2	511.4	16.2
201.6	569.9	18.8
201.9	583.2	19.4
202.2	564.2	18.5
202.5	552.5	18.0
202.9	551.3	18.0
203.2	552.1	18.0
203.5	548.8	17.9
203.9	538.2	17.4
204.2	598.4	20.0
204.5	564.9	18.6
204.8	521.8	16.7
205.2	541.8	17.5
205.5	544.2	17.7
205.8	518.2	16.5
206.1	526.2	16.9
206.5	549.7	17.9
206.8	560.3	18.4
207.1	540.0	17.5
207.5	528.5	17.0
207.8	521.3	16.7
208.1	531.9	17.1
208.4	544.6	17.7
208.8	542.3	17.6
209.1	512.4	16.3
209.4	548.9	17.9
209.7	505.3	16.0
210.1	539.7	17.5
210.4	493.3	15.5
210.7	532.4	17.1
211.1	541.5	17.5
211.4	528.4	17.0
211.7	525.8	16.9
212.0	498.8	15.7
212.4	506.1	16.0
212.7	504.6	16.0

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
216.2	640.3	21.9
216.5	679.2	23.8
216.8	605.8	20.4
217.2	641.1	22.0
217.5	658.7	22.8
217.8	616.9	20.9
218.1	646.1	22.2
218.5	607.9	20.5
218.8	640.0	21.9
219.1	641.1	22.0
219.5	621.1	21.1
219.8	637.6	21.8
220.1	658.7	22.8
220.4	619.7	21.0
220.8	592.9	19.8
221.1	638.7	21.9
221.4	602.1	20.2
221.7	609.2	20.5
222.1	644.7	22.2
222.4	628.9	21.4
222.7	608.7	20.5
223.1	660.8	22.9
223.4	698.2	24.7
223.7	633.9	21.7
224.0	658.4	22.8
224.4	626.6	21.3
224.7	633.4	21.6
225.0	647.6	22.3
225.3	645.8	22.2
225.7	695.3	24.5
226.0	632.3	21.6
226.3	618.7	21.0
226.7	653.1	22.5
227.0	627.5	21.4
227.3	604.0	20.3
227.6	652.5	22.5
228.0	633.1	21.6
228.3	611.8	20.7

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
213.0	537.7	17.4
213.3	492.8	15.5
213.7	532.2	17.1
214.0	528.1	17.0
214.3	491.0	15.4
214.7	543.1	17.6
215.0	523.8	16.8
215.3	532.2	17.1
215.6	544.3	17.7
216.0	521.0	16.7
216.3	506.3	16.0
216.6	530.1	17.0
217.0	510.0	16.2
217.3	537.5	17.4
217.6	556.5	18.2
217.9	556.0	18.2
218.3	525.6	16.8
218.6	497.7	15.7
218.9	502.5	15.9
219.2	506.1	16.0
219.6	507.3	16.1
219.9	514.4	16.4
220.2	527.8	16.9
220.6	491.8	15.4
220.9	525.8	16.9
221.2	530.5	17.1
221.5	530.6	17.1
221.9	524.8	16.8
222.2	498.7	15.7
222.5	502.5	15.9
222.8	549.2	17.9
223.2	528.5	17.0
223.5	507.1	16.1
223.8	562.8	18.5
224.2	520.8	16.6
224.5	511.8	16.3
224.8	556.7	18.2
225.1	555.6	18.2

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
228.6	651.1	22.4
228.9	627.3	21.4
229.3	669.5	23.3
229.6	621.1	21.1
229.9	597.6	20.0
230.3	624.4	21.2
230.6	652.1	22.5
230.9	630.6	21.5
231.2	641.3	22.0
231.6	663.1	23.0
231.9	649.2	22.4
232.2	657.6	22.8
232.5	595.3	19.9
232.9	637.9	21.8
233.2	611.3	20.6
233.5	606.3	20.4
233.9	644.2	22.1
234.2	663.9	23.0
234.5	655.3	22.6
234.8	635.8	21.7
235.2	628.4	21.4
235.5	648.8	22.3
235.8	653.8	22.6
236.1	622.4	21.1
236.5	636.1	21.8
236.8	645.5	22.2
237.1	623.4	21.2
237.5	644.4	22.1
237.8	662.6	23.0
238.1	625.5	21.3
238.4	676.9	23.6
238.8	581.6	19.3
239.1	652.5	22.5
239.4	588.1	19.6
239.7	626.1	21.3
240.1	665.7	23.1
240.4	636.3	21.8
240.7	641.3	22.0

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
225.5	504.6	16.0
225.8	533.8	17.2
226.1	548.7	17.8
226.4	539.7	17.5
226.8	545.8	17.7
227.1	539.5	17.4
227.4	507.4	16.1
227.8	485.6	15.2
228.1	536.2	17.3
228.4	527.8	16.9
228.7	523.6	16.8
229.1	561.3	18.4
229.4	537.7	17.4
229.7	536.4	17.3
230.0	528.1	17.0
230.4	510.5	16.2
230.7	532.8	17.2
231.0	524.4	16.8
231.4	519.0	16.6
231.7	512.2	16.3
232.0	546.1	17.7
232.3	535.2	17.3
232.7	512.2	16.3
233.0	543.8	17.6
233.6	550.6	17.9
234.0	538.2	17.4
234.3	531.4	17.1
234.6	531.4	17.1
235.0	539.5	17.4
235.3	502.5	15.9
235.6	544.4	17.7
235.9	528.9	17.0
236.3	515.7	16.4
236.6	512.8	16.3
236.9	524.8	16.8
237.2	530.4	17.1
237.6	549.4	17.9
237.9	532.2	17.1

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
241.1	641.1	22.0
241.4	616.2	20.8
241.7	640.8	22.0
242.0	579.2	19.2
242.4	619.5	21.0
242.7	648.8	22.3
243.0	648.1	22.3
243.3	592.2	19.8
243.7	672.2	23.4
244.0	696.6	24.6
244.3	607.8	20.5
245.0	644.4	22.1
245.3	626.0	21.3
245.6	615.8	20.8
246.0	620.5	21.0
246.3	587.4	19.6
246.6	583.8	19.4
246.9	603.9	20.3
247.3	639.2	21.9
247.6	586.5	19.5
247.9	614.0	20.8
248.3	623.4	21.2
248.6	649.7	22.4
248.9	645.5	22.2
249.2	617.9	20.9
249.6	618.5	21.0
249.9	618.2	20.9
250.2	655.8	22.7
250.6	616.9	20.9
250.9	596.4	20.0
251.2	652.8	22.5
251.5	713.0	25.4
251.9	686.4	24.1
252.2	728.6	26.1
252.5	732.6	26.3
252.8	654.1	22.6
253.2	702.6	24.9
253.5	710.1	25.2

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
238.2	580.3	19.2
238.6	521.5	16.7
238.9	509.6	16.2
239.2	505.3	16.0
239.5	537.7	17.4
239.9	512.4	16.3
240.2	523.8	16.8
240.5	523.8	16.8
240.8	519.2	16.6
241.2	542.0	17.6
241.5	523.5	16.8
241.8	533.2	17.2
242.2	553.7	18.1
242.5	548.3	17.8
242.8	516.7	16.5
243.1	535.2	17.3
243.5	511.0	16.2
243.8	518.5	16.5
244.1	531.5	17.1
244.4	531.9	17.1
244.8	504.8	16.0
245.1	482.5	15.0
245.4	505.6	16.0
245.8	524.8	16.8
246.1	508.3	16.1
246.4	485.8	15.2
246.7	521.8	16.7
247.1	523.8	16.8
247.4	529.3	17.0
247.7	522.8	16.7
248.0	488.9	15.3
248.4	506.1	16.0
248.7	535.8	17.3
249.0	533.0	17.2
249.4	536.2	17.3
249.7	547.0	17.8
250.0	520.5	16.6
250.3	542.5	17.6

Table C-1.0-1 (continued)

Second Quarter FY2007		
Depth (ft)	**CPS**	**% Moisture**
254.2	761.6	27.7
254.5	726.2	26.0
254.8	727.5	26.1
255.1	665.1	23.1
255.5	615.9	20.8
255.8	663.8	23.0
256.1	670.3	23.3
256.4	739.8	26.6
256.8	763.7	27.8
257.1	792.9	29.2
257.4	765.0	27.9
257.8	722.1	25.8
258.1	639.5	21.9
258.4	610.3	20.6
258.7	653.9	22.6
259.1	655.0	22.6
259.4	793.9	29.3
259.7	814.5	30.3
260.0	880.8	33.7

Third Quarter FY2007		
Depth (ft)	**CPS**	**% Moisture**
250.7	542.0	17.6
251.0	576.8	19.1
251.3	597.5	20.0
251.6	592.3	19.8
252.0	600.5	20.1
252.3	593.3	19.8
252.6	584.3	19.4
253.0	585.5	19.5
253.3	595.3	19.9
253.6	629.8	21.5
253.9	630.3	21.5
254.3	542.5	17.6
254.6	539.0	17.4
254.9	530.1	17.0
255.2	543.0	17.6
255.6	581.2	19.3
255.9	595.3	19.9
256.2	622.7	21.1
256.6	659.5	22.8
256.9	633.5	21.6
257.2	626.0	21.3
257.5	581.5	19.3
257.9	514.9	16.4
258.2	555.0	18.1
258.5	591.3	19.7
258.8	627.3	21.4
259.2	651.0	22.4
259.5	693.9	24.4

Table C-1.0-2
54-15461 Neutron-Activation Moisture Results during Second and Third Quarter FY2007

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
0.8	310.1	7.8
1.1	394.1	11.2
1.4	463.0	14.4
1.7	502.7	16.3
2.1	468.5	14.6
2.4	516.5	17.0
2.7	458.7	14.2
3.1	491.5	15.8
3.4	444.3	13.5
3.7	429.4	12.8
4.0	433.1	13.0
4.4	360.5	9.8
4.7	378.6	10.6
5.0	412.3	12.0
5.3	408.8	11.9
5.7	380.5	10.6
6.0	377.4	10.5
6.3	345.2	9.2
6.7	334.4	8.7
7.0	341.0	9.0
7.3	274.3	6.4
7.6	221.1	4.6
8.0	214.1	4.4
8.3	232.1	5.0
8.6	274.4	6.4
8.9	303.1	7.5
9.3	325.4	8.4
9.6	282.6	6.7
9.9	246.5	5.5
10.3	253.8	5.7
10.6	226.6	4.8
10.9	221.1	4.6
11.2	193.2	3.8
11.9	167.4	3.0
12.2	187.6	3.6
12.5	195.6	3.8

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
0.8	308.4	7.7
1.1	328.1	8.5
1.4	346.3	9.2
1.8	348.4	9.3
2.1	354.8	9.5
2.4	367.7	10.1
2.8	382.5	10.7
3.1	372.6	10.3
3.4	380.3	10.6
3.7	359.7	9.8
4.1	335.6	8.8
4.4	368.1	10.1
4.7	331.6	8.6
5.0	341.9	9.0
5.4	344.7	9.1
5.7	320.3	8.2
6.0	305.9	7.6
6.4	305.7	7.6
6.7	282.6	6.7
7.0	249.1	5.5
7.3	198.2	3.9
7.7	197.4	3.9
8.0	216.1	4.5
8.3	229.5	4.9
8.6	243.0	5.3
9.0	229.7	4.9
9.3	242.4	5.3
9.6	243.7	5.4
10.0	223.1	4.7
10.3	228.3	4.9
10.6	225.6	4.8
10.9	209.4	4.2
11.3	196.4	3.8
11.6	197.9	3.9
11.9	167.8	3.0
12.2	174.9	3.2

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
12.9	171.4	3.1
13.2	192.8	3.7
13.5	182.2	3.4
13.9	160.3	2.8
14.2	175.5	3.2
14.5	183.6	3.5
14.8	215.5	4.4
15.2	176.9	3.3
15.5	174.9	3.2
15.8	184.1	3.5
16.1	163.3	2.9
16.5	175.7	3.2
16.8	199.5	3.9
17.1	209.3	4.2
17.5	210.0	4.3
17.8	194.7	3.8
18.1	194.5	3.8
18.4	222.1	4.6
18.8	216.1	4.5
19.1	233.6	5.0
19.4	227.3	4.8
19.7	230.8	4.9
20.1	227.8	4.8
20.4	216.6	4.5
20.7	227.1	4.8
21.1	225.8	4.8
21.4	183.1	3.5
21.7	206.5	4.2
22.0	204.3	4.1
22.4	217.1	4.5
22.7	171.1	3.1
23.0	166.5	3.0
23.3	182.8	3.4
23.7	166.6	3.0
24.0	182.7	3.4
24.3	190.1	3.7
24.7	182.2	3.4
25.0	206.6	4.2

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
12.6	163.2	2.9
12.9	152.9	2.6
13.2	175.9	3.2
13.6	178.7	3.3
13.9	182.6	3.4
14.2	194.8	3.8
14.5	207.9	4.2
14.9	176.5	3.3
15.2	178.2	3.3
15.5	193.7	3.8
15.8	208.0	4.2
16.2	180.5	3.4
16.5	170.0	3.1
16.8	198.5	3.9
17.2	205.6	4.1
17.5	215.2	4.4
17.8	191.4	3.7
18.1	204.9	4.1
18.5	195.8	3.8
18.8	202.0	4.0
19.1	220.8	4.6
19.4	213.5	4.4
19.8	210.6	4.3
20.1	216.8	4.5
20.4	181.9	3.4
20.8	179.0	3.3
21.1	214.1	4.4
21.4	191.5	3.7
21.7	182.1	3.4
22.1	186.3	3.5
22.4	185.3	3.5
22.7	160.5	2.8
23.0	147.4	2.5
23.4	173.4	3.2
23.7	173.8	3.2
24.0	171.3	3.1
24.4	169.5	3.1
24.7	161.3	2.8

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
25.3	173.0	3.2
25.6	171.9	3.1
26.0	167.3	3.0
26.3	197.6	3.9
26.6	193.8	3.8
26.9	210.4	4.3
27.3	212.4	4.3
27.9	200.0	4.0
28.3	241.1	5.3
28.6	232.5	5.0
28.9	231.8	5.0
29.2	280.8	6.7
29.6	258.7	5.9
29.9	302.7	7.5
30.2	270.8	6.3
30.5	292.9	7.1
30.9	247.9	5.5
31.2	287.6	6.9
31.5	271.8	6.3
31.9	288.5	7.0
32.2	257.1	5.8
32.5	274.5	6.4
32.8	307.7	7.7
33.2	294.2	7.2
33.5	278.1	6.6
33.8	304.9	7.6
34.1	289.9	7.0
34.5	267.4	6.2
34.8	291.9	7.1
35.1	332.1	8.6
35.5	294.7	7.2
35.8	338.7	8.9
36.1	318.9	8.1
36.4	272.5	6.4
36.8	291.6	7.1
37.1	281.3	6.7
37.4	302.6	7.5
37.7	273.2	6.4

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
25.0	178.3	3.3
25.3	177.3	3.3
25.7	171.6	3.1
26.0	180.0	3.4
26.3	180.8	3.4
26.6	186.3	3.5
27.0	195.3	3.8
27.3	196.3	3.8
27.6	185.3	3.5
28.0	201.5	4.0
28.3	200.5	4.0
28.6	208.5	4.2
28.9	213.3	4.4
29.3	222.9	4.7
29.6	220.0	4.6
29.9	242.8	5.3
30.2	239.3	5.2
30.6	245.2	5.4
30.9	255.8	5.8
31.2	220.5	4.6
31.6	235.4	5.1
31.9	233.3	5.0
32.2	241.8	5.3
32.5	245.9	5.4
32.9	243.8	5.4
33.2	244.7	5.4
33.5	245.3	5.4
33.8	255.6	5.8
34.2	244.3	5.4
34.5	235.2	5.1
34.8	230.3	4.9
35.2	244.8	5.4
35.5	251.3	5.6
35.8	233.1	5.0
36.1	232.8	5.0
36.5	256.8	5.8
36.8	251.6	5.6
37.1	228.1	4.8

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
38.1	294.2	7.2
38.4	268.9	6.2
38.7	251.1	5.6
39.1	268.1	6.2
39.4	261.6	6.0
39.7	245.5	5.4
40.0	234.4	5.1
40.4	222.9	4.7
40.7	241.3	5.3
41.0	205.5	4.1
41.3	204.2	4.1
41.7	236.1	5.1
42.0	235.5	5.1
42.3	219.7	4.6
42.7	258.3	5.9
43.0	260.8	6.0
43.3	278.5	6.6
43.6	279.2	6.6
44.0	269.9	6.3
44.3	247.8	5.5
44.6	245.7	5.4
44.9	230.7	4.9
45.3	304.4	7.5
45.6	247.4	5.5
45.9	231.8	5.0
46.3	270.6	6.3
46.6	276.3	6.5
46.9	257.3	5.8
47.2	271.1	6.3
47.6	256.0	5.8
48.2	278.9	6.6
48.6	284.3	6.8
48.9	269.9	6.3
49.2	290.1	7.0
49.5	286.8	6.9
49.9	273.2	6.4
50.2	259.5	5.9
50.5	277.9	6.6

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
37.4	222.0	4.6
37.8	254.3	5.7
38.1	227.9	4.8
38.4	250.6	5.6
38.8	241.0	5.3
39.1	240.7	5.3
39.4	207.9	4.2
39.7	197.9	3.9
40.1	225.1	4.7
40.4	198.7	3.9
40.7	203.7	4.1
41.0	201.1	4.0
41.4	212.3	4.3
41.7	211.2	4.3
42.0	215.7	4.4
42.4	217.3	4.5
42.7	228.5	4.9
43.0	204.3	4.1
43.3	218.4	4.5
43.7	231.2	4.9
44.0	212.2	4.3
44.3	234.1	5.0
44.6	229.0	4.9
45.0	220.5	4.6
45.3	207.6	4.2
45.6	207.6	4.2
46.0	223.7	4.7
46.3	208.7	4.2
46.6	216.1	4.5
46.9	234.1	5.0
47.3	257.6	5.8
47.6	232.4	5.0
47.9	214.7	4.4
48.2	251.6	5.6
48.6	229.7	4.9
48.9	230.7	4.9
49.2	234.3	5.0
49.6	232.1	5.0

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
50.8	281.8	6.7
51.2	277.4	6.5
51.5	294.1	7.2
51.8	290.0	7.0
52.2	283.8	6.8
52.5	272.6	6.4
52.8	269.1	6.2
53.1	304.4	7.5
53.5	246.1	5.4
53.8	271.6	6.3
54.1	257.7	5.8
54.4	268.7	6.2
54.8	277.2	6.5
55.1	265.6	6.1
55.4	249.4	5.6
55.8	256.5	5.8
56.1	244.6	5.4
56.4	255.9	5.8
56.7	260.3	5.9
57.1	235.4	5.1
57.4	246.5	5.5
57.7	277.0	6.5
58.0	293.5	7.1
58.4	261.7	6.0
58.7	254.3	5.7
59.0	259.0	5.9
59.4	277.4	6.5
59.7	268.8	6.2
60.0	276.7	6.5
60.3	291.9	7.1
60.7	264.7	6.1
61.0	279.0	6.6
61.3	241.0	5.3
61.6	240.8	5.3
62.0	230.0	4.9
62.3	276.9	6.5
62.6	267.8	6.2
63.0	262.5	6.0

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
49.9	225.9	4.8
50.2	247.9	5.5
50.5	238.7	5.2
50.9	251.6	5.6
51.5	258.4	5.9
51.9	237.4	5.1
52.2	247.8	5.5
52.5	260.8	6.0
52.8	245.5	5.4
53.2	261.3	6.0
53.5	224.7	4.7
53.8	249.7	5.6
54.1	245.1	5.4
54.5	244.7	5.4
54.8	239.5	5.2
55.1	225.2	4.7
55.5	239.5	5.2
55.8	224.4	4.7
56.1	229.6	4.9
56.4	220.0	4.6
56.8	222.8	4.7
57.1	216.7	4.5
57.4	241.5	5.3
57.7	239.7	5.2
58.1	236.4	5.1
58.4	221.3	4.6
58.7	238.5	5.2
59.1	220.3	4.6
59.4	225.8	4.8
59.7	214.4	4.4
60.0	243.2	5.3
60.4	235.1	5.1
60.7	247.7	5.5
61.0	236.5	5.1
61.3	239.5	5.2
61.7	230.8	4.9
62.0	221.9	4.6
62.3	217.6	4.5

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
63.3	231.8	5.0
63.6	243.0	5.3
63.9	213.8	4.4
64.3	223.3	4.7
64.6	239.0	5.2
64.9	214.3	4.4
65.2	202.7	4.0
65.6	190.8	3.7
65.9	198.3	3.9
66.2	199.5	3.9
66.6	209.9	4.3
66.9	200.0	4.0
67.2	177.0	3.3
67.5	181.8	3.4
67.9	195.0	3.8
68.2	189.1	3.6
68.5	181.3	3.4
68.8	201.8	4.0
69.2	200.0	4.0
69.5	162.5	2.9
69.8	170.6	3.1
70.2	201.2	4.0
70.5	196.8	3.9
70.8	169.3	3.1
71.1	197.0	3.9
71.5	185.4	3.5
71.8	184.0	3.5
72.1	185.8	3.5
72.4	189.9	3.7
72.8	174.8	3.2
73.1	175.3	3.2
73.4	171.5	3.1
73.8	171.0	3.1
74.1	193.3	3.8
74.4	183.5	3.5
74.7	198.0	3.9
75.1	186.4	3.6
75.4	201.3	4.0

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
62.7	230.9	4.9
63.0	256.3	5.8
63.3	221.0	4.6
63.6	175.8	3.2
64.0	214.0	4.4
64.3	205.9	4.1
64.6	216.8	4.5
64.9	200.3	4.0
65.3	212.8	4.4
65.6	193.9	3.8
65.9	188.0	3.6
66.3	205.4	4.1
66.6	199.0	3.9
66.9	201.5	4.0
67.2	175.3	3.2
67.6	189.5	3.6
67.9	184.0	3.5
68.2	175.4	3.2
68.5	181.3	3.4
68.9	174.2	3.2
69.2	174.3	3.2
69.5	156.0	2.7
69.9	174.3	3.2
70.2	171.9	3.1
70.5	177.5	3.3
70.8	166.8	3.0
71.2	166.2	3.0
71.5	161.5	2.8
71.8	172.8	3.2
72.1	169.9	3.1
72.5	175.7	3.2
72.8	164.1	2.9
73.1	158.5	2.8
73.5	169.1	3.1
73.8	175.8	3.2
74.1	178.8	3.3
74.4	172.9	3.2
74.8	172.1	3.1

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
75.7	190.9	3.7
76.0	194.1	3.8
76.4	201.5	4.0
76.7	179.0	3.3
77.4	175.0	3.2
77.7	194.2	3.8
78.0	170.6	3.1
78.3	200.0	4.0
78.7	181.5	3.4
79.0	222.8	4.7
79.3	194.2	3.8
79.6	200.0	4.0
80.0	200.8	4.0
80.3	221.0	4.6
80.6	189.0	3.6
81.0	215.8	4.4
81.3	206.8	4.2
81.6	176.7	3.3
81.9	210.9	4.3
82.3	205.0	4.1
82.6	181.5	3.4
82.9	193.9	3.8
83.2	228.8	4.9
83.6	226.9	4.8
83.9	204.1	4.1
84.2	218.3	4.5
84.6	215.1	4.4
84.9	238.5	5.2
85.2	237.3	5.1
85.5	233.2	5.0
85.9	240.2	5.2
86.2	231.4	4.9
86.5	254.1	5.7
86.8	244.9	5.4
87.2	216.0	4.5
87.5	232.3	5.0
87.8	227.7	4.8
88.2	242.9	5.3

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
75.1	182.3	3.4
75.4	194.4	3.8
75.7	181.7	3.4
76.1	164.4	2.9
76.4	182.2	3.4
76.7	178.8	3.3
77.1	195.9	3.8
77.4	191.4	3.7
77.7	194.3	3.8
78.0	182.0	3.4
78.4	171.6	3.1
78.7	190.4	3.7
79.0	169.5	3.1
79.3	173.9	3.2
79.7	203.1	4.1
80.0	192.9	3.7
80.3	208.2	4.2
80.7	192.6	3.7
81.0	184.7	3.5
81.3	181.9	3.4
81.6	191.9	3.7
82.0	197.0	3.9
82.3	197.6	3.9
82.6	200.7	4.0
82.9	176.9	3.3
83.3	193.4	3.8
83.6	185.2	3.5
83.9	194.6	3.8
84.3	183.6	3.5
84.6	196.5	3.9
84.9	213.3	4.4
85.2	206.9	4.2
85.6	206.6	4.2
85.9	191.8	3.7
86.2	201.2	4.0
86.5	196.2	3.8
86.9	199.0	3.9
87.2	205.0	4.1

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
88.5	223.5	4.7
88.8	217.8	4.5
89.1	221.8	4.6
89.5	221.7	4.6
89.8	230.1	4.9
90.1	210.7	4.3
90.4	210.3	4.3
90.8	215.0	4.4
91.4	218.3	4.5
91.8	190.9	3.7
92.1	197.3	3.9
92.4	214.9	4.4
92.7	230.1	4.9
93.1	197.9	3.9
93.4	192.1	3.7
93.7	200.6	4.0
94.0	215.2	4.4
94.4	212.8	4.4

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
87.5	202.9	4.0
87.9	202.8	4.0
88.2	211.2	4.3
88.5	209.3	4.2
88.8	218.6	4.5
89.2	185.2	3.5
89.5	183.5	3.5
89.8	189.6	3.6
90.1	185.2	3.5
90.5	202.7	4.0
90.8	206.3	4.2
91.1	182.8	3.4
91.5	208.0	4.2
91.8	196.9	3.9
92.1	212.0	4.3
92.4	184.7	3.5
92.8	185.9	3.5
93.4	194.0	3.8
93.7	207.5	4.2
94.1	193.4	3.8
94.4	203.7	4.1
94.7	203.6	4.1
95.1	187.8	3.6
95.4	201.5	4.0
95.7	211.8	4.3
96.0	195.4	3.8
96.4	214.0	4.4
96.7	197.9	3.9
97.0	203.4	4.1

Table C-1.0-3
54-15462 Neutron-Activation Moisture Results during Second and Third Quarter FY2007

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
1.1	117.9	1.7
1.4	215.5	4.3
1.8	329.2	8.3
2.1	400.5	11.2
2.4	397.1	11.0
2.7	412.1	11.7
3.1	429.9	12.4
3.4	372.7	10.0
3.7	379.5	10.3
4.0	398.2	11.1
4.4	397.7	11.0
4.7	430.5	12.5
5.0	395.1	10.9
5.4	376.8	10.2
5.7	393.2	10.8
6.0	402.4	11.2
6.3	399.2	11.1
6.7	420.5	12.0
7.0	382.3	10.4
7.3	395.0	10.9
7.6	377.4	10.2
8.0	313.4	7.7
8.3	271.9	6.2
8.6	258.4	5.7
9.0	248.9	5.4
9.3	289.9	6.8
9.6	340.0	8.7
9.9	343.7	8.8
10.3	368.3	9.8
10.6	385.2	10.5
10.9	375.3	10.1
11.2	372.2	10.0
11.6	371.9	10.0
11.9	362.4	9.6

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
0.3	295.6	7.2
0.6	331.2	8.6
0.9	340.5	9.0
1.3	355.8	9.6
1.6	358.4	9.7
1.9	356.4	9.6
2.2	337.7	8.9
2.6	353.2	9.5
2.9	346.6	9.2
3.2	373.8	10.3
3.5	351.0	9.4
3.9	351.6	9.4
4.2	370.6	10.2
4.5	351.0	9.4
4.9	348.4	9.3
5.2	337.4	8.8
5.5	323.1	8.3
5.8	328.4	8.5
6.2	294.8	7.2
6.5	262.0	6.0
6.8	257.4	5.8
7.1	223.5	4.7
7.5	248.7	5.5
7.8	296.7	7.3
8.1	320.5	8.2
8.5	346.3	9.2
8.8	326.2	8.4
9.1	344.3	9.1
9.4	343.5	9.1
9.8	352.3	9.4
10.1	340.5	9.0
10.4	300.5	7.4
10.7	328.1	8.5
11.1	335.6	8.8

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
12.2	365.5	9.7
12.6	356.9	9.3
12.9	384.5	10.5
13.2	323.1	8.0
13.5	351.4	9.1
13.9	330.4	8.3
14.2	319.2	7.9
14.5	324.5	8.1
14.8	326.9	8.2
15.2	341.0	8.7
15.5	310.9	7.6
15.8	307.4	7.4
16.2	321.0	7.9
16.5	339.0	8.6
16.8	351.3	9.1
17.1	329.0	8.2
17.5	329.4	8.3
17.8	313.7	7.7
18.1	317.5	7.8
18.4	306.1	7.4
18.8	324.1	8.1
19.1	306.7	7.4
19.4	308.6	7.5
19.8	297.8	7.1
20.1	313.3	7.6
20.4	302.5	7.2
20.7	310.1	7.5
21.1	310.6	7.5
21.4	301.8	7.2
21.7	311.9	7.6
22.0	304.6	7.3
22.4	323.8	8.0
22.7	300.5	7.2
23.0	292.7	6.9
23.4	305.6	7.4
23.7	312.8	7.6

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
11.4	329.1	8.5
11.7	319.0	8.1
12.1	297.8	7.3
12.4	335.7	8.8
12.7	304.6	7.6
13.0	295.0	7.2
13.4	315.3	8.0
13.7	289.4	7.0
14.0	281.5	6.7
14.3	261.3	6.0
14.7	309.7	7.8
15.0	304.8	7.6
15.3	296.9	7.3
15.7	302.0	7.5
16.0	277.1	6.5
16.3	288.3	6.9
16.6	300.3	7.4
17.0	266.5	6.2
17.3	258.8	5.9
17.6	295.9	7.2
17.9	286.1	6.9
18.3	272.9	6.4
18.6	286.0	6.9
18.9	266.2	6.1
19.3	294.3	7.2
19.6	269.5	6.3
19.9	287.3	6.9
20.2	280.2	6.6
20.6	286.3	6.9
20.9	270.2	6.3
21.2	288.3	6.9
21.5	268.3	6.2
21.9	287.0	6.9
22.2	267.6	6.2
22.5	286.8	6.9
22.9	258.6	5.9

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
24.0	280.3	6.4
24.3	292.9	6.9
24.7	318.0	7.8
25.0	304.3	7.3
25.3	316.4	7.8
25.6	313.2	7.6
26.0	275.6	6.3
26.3	306.3	7.4
26.6	305.6	7.4
27.0	282.3	6.5
27.3	285.8	6.6
27.6	293.4	6.9
27.9	297.9	7.1
28.3	293.1	6.9
28.6	306.3	7.4
28.9	275.7	6.3
29.2	290.4	6.8
29.6	266.6	6.0
29.9	304.6	7.3
30.2	269.9	6.1
30.6	267.0	6.0
30.9	257.2	5.6
31.2	280.8	6.5
31.5	266.7	6.0
31.9	266.6	6.0
32.2	272.0	6.2
32.5	267.1	6.0
32.8	275.5	6.3
33.2	266.6	6.0
33.5	252.0	5.5
33.8	225.3	4.6
34.2	256.7	5.6
34.5	247.3	5.3
34.8	247.1	5.3
35.1	246.1	5.3
35.5	224.5	4.6

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
23.2	248.8	5.5
23.5	263.0	6.0
23.8	259.5	5.9
24.2	222.3	4.7
24.5	269.8	6.3
24.8	265.7	6.1
25.1	282.0	6.7
25.5	281.3	6.7
25.8	278.8	6.6
26.1	280.0	6.6
26.5	253.3	5.7
26.8	268.0	6.2
27.1	246.0	5.4
27.4	257.3	5.8
27.8	256.7	5.8
28.1	238.3	5.2
28.4	238.8	5.2
28.7	257.5	5.8
29.1	239.5	5.2
29.4	254.4	5.7
29.7	278.3	6.6
30.1	238.8	5.2
30.4	233.3	5.0
30.7	227.0	4.8
31.0	242.2	5.3
31.4	239.0	5.2
31.7	229.2	4.9
32.0	230.1	4.9
32.3	236.5	5.1
32.7	226.0	4.8
33.0	213.7	4.4
33.7	202.3	4.0
34.0	219.5	4.6
34.3	204.9	4.1
34.6	197.0	3.9
35.0	205.2	4.1

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
35.8	232.2	4.8
36.1	210.3	4.1
36.4	251.1	5.4
36.8	229.4	4.7
37.1	209.0	4.1
37.4	205.0	4.0
37.8	227.1	4.7
38.1	188.4	3.5
38.4	215.4	4.3
38.7	198.7	3.8
39.1	175.9	3.2
39.4	202.3	3.9
39.7	196.3	3.7
40.0	191.1	3.6
40.4	229.9	4.8
40.7	227.3	4.7
41.0	229.4	4.7
41.4	199.0	3.8
41.7	199.7	3.8
42.0	208.1	4.1
42.3	210.5	4.2
42.7	203.5	3.9
43.0	200.5	3.9
43.3	182.5	3.3
43.6	186.2	3.4
44.0	192.3	3.6
44.3	191.4	3.6
44.6	167.8	2.9
45.0	169.0	3.0
45.3	166.8	2.9
45.6	177.0	3.2
45.9	169.6	3.0
46.3	186.0	3.4
46.6	189.0	3.5
46.9	179.5	3.2
47.2	154.3	2.6

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
35.3	211.9	4.3
35.6	203.5	4.1
36.3	190.4	3.7
36.6	204.1	4.1
36.9	175.8	3.2
37.3	179.8	3.4
37.6	192.0	3.7
37.9	186.3	3.5
38.2	189.3	3.6
38.6	198.5	3.9
38.9	193.1	3.7
39.2	192.2	3.7
39.6	161.5	2.8
39.9	187.0	3.6
40.2	177.5	3.3
40.5	188.3	3.6
40.9	181.5	3.4
41.2	180.3	3.4
41.5	194.4	3.8
41.8	168.9	3.1
42.2	177.8	3.3
42.5	186.4	3.6
42.8	175.5	3.2
43.2	169.6	3.1
43.5	168.1	3.0
43.8	170.4	3.1
44.1	183.0	3.5
44.5	174.2	3.2
44.8	184.0	3.5
45.1	160.5	2.8
45.4	177.6	3.3
45.8	163.6	2.9
46.1	157.3	2.7
46.4	179.8	3.4
46.8	170.5	3.1
47.1	169.5	3.1

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
47.6	169.5	3.0
47.9	168.0	2.9
48.2	159.0	2.7
48.6	172.5	3.1
48.9	186.5	3.4
49.2	188.0	3.5
49.5	180.0	3.3
49.9	159.3	2.7
50.2	183.0	3.3
50.5	164.3	2.8
50.8	156.2	2.6
51.2	173.3	3.1
51.5	184.1	3.4
51.8	160.3	2.7
52.2	187.8	3.5
52.5	186.8	3.5
52.8	205.3	4.0
53.1	168.1	2.9
53.5	199.5	3.8
53.8	177.3	3.2
54.1	177.5	3.2
54.4	184.4	3.4
54.8	174.0	3.1
55.1	196.4	3.7
55.4	196.7	3.7
55.8	186.6	3.4
56.1	195.1	3.7
56.4	228.8	4.7
56.7	187.5	3.5
57.1	192.1	3.6
57.4	201.7	3.9
57.7	187.1	3.5
58.1	204.9	4.0
58.4	184.1	3.4
58.7	209.3	4.1
59.0	197.0	3.7

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
47.4	182.1	3.4
48.1	183.5	3.5
48.4	171.8	3.1
48.7	186.8	3.6
49.0	162.7	2.9
49.4	159.0	2.8
49.7	173.6	3.2
50.0	173.1	3.2
50.4	189.8	3.6
50.7	169.1	3.1
51.0	153.6	2.6
51.3	165.1	2.9
51.7	187.6	3.6
52.0	168.2	3.0
52.3	166.0	3.0
52.6	178.2	3.3
53.0	171.5	3.1
53.3	190.2	3.7
53.6	187.6	3.6
54.0	199.0	3.9
54.3	183.6	3.5
54.6	178.0	3.3
54.9	185.3	3.5
55.3	211.6	4.3
55.6	183.4	3.5
55.9	175.1	3.2
56.2	179.3	3.3
56.6	178.6	3.3
56.9	180.7	3.4
57.2	175.6	3.2
57.6	189.9	3.7
57.9	178.8	3.3
58.2	199.3	3.9
58.5	199.8	3.9
58.9	189.3	3.6
59.2	198.8	3.9

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
59.4	178.1	3.2
59.7	178.4	3.2
60.0	191.0	3.6
60.3	185.8	3.4
60.7	195.9	3.7
61.0	232.4	4.8
61.3	200.3	3.8
61.7	214.5	4.3
62.0	234.5	4.9
62.3	211.5	4.2
62.6	193.2	3.6
63.0	217.0	4.3
63.3	213.5	4.2
63.6	223.8	4.6
63.9	195.1	3.7
64.3	181.6	3.3
64.6	201.6	3.9
64.9	197.3	3.8
65.3	186.8	3.5
65.6	180.0	3.3
65.9	185.1	3.4
66.2	188.8	3.5
66.6	214.9	4.3
66.9	181.9	3.3
67.2	200.3	3.8
67.5	209.9	4.1
67.9	188.1	3.5
68.2	217.3	4.4
68.5	190.3	3.6
68.9	203.0	3.9
69.2	210.1	4.1
69.5	218.6	4.4
69.8	215.1	4.3
70.2	237.6	5.0
70.5	181.6	3.3
70.8	199.2	3.8

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
59.5	188.4	3.6
59.8	219.8	4.6
60.2	189.1	3.6
60.5	173.0	3.2
60.8	195.6	3.8
61.2	202.3	4.0
61.5	172.8	3.2
61.8	173.3	3.2
62.1	183.0	3.5
62.5	177.3	3.3
62.8	198.6	3.9
63.1	202.7	4.0
63.4	189.6	3.6
63.8	175.7	3.2
64.1	194.7	3.8
64.4	180.2	3.4
64.8	197.6	3.9
65.1	189.0	3.6
65.4	178.3	3.3
65.7	183.6	3.5
66.1	193.7	3.8
66.4	191.6	3.7
66.7	197.8	3.9
67.0	218.1	4.5
67.4	194.2	3.8
67.7	184.4	3.5
68.0	184.3	3.5
68.4	186.7	3.6
68.7	213.6	4.4
69.0	193.3	3.8
69.3	167.3	3.0
69.7	168.0	3.0
70.0	183.9	3.5
70.3	179.3	3.3
70.6	188.1	3.6
71.0	172.8	3.2

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
71.1	192.5	3.6
71.5	205.7	4.0
71.8	193.3	3.6
72.1	213.2	4.2
72.5	204.5	4.0
72.8	211.4	4.2
73.1	218.1	4.4
73.4	205.4	4.0
73.8	196.0	3.7
74.1	183.4	3.4
74.4	214.4	4.3
74.7	193.8	3.7
75.1	188.3	3.5
75.4	202.4	3.9
75.7	186.1	3.4
76.1	203.5	3.9
76.4	186.4	3.4
76.7	193.3	3.6
77.0	207.0	4.0
77.4	182.9	3.3
77.7	171.8	3.0
78.0	211.2	4.2
78.3	214.7	4.3
78.7	189.3	3.5
79.0	201.9	3.9
79.3	197.6	3.8
79.7	198.1	3.8
80.0	205.9	4.0
80.3	182.7	3.3
80.6	193.1	3.6
81.0	198.4	3.8
81.3	198.7	3.8
81.6	200.5	3.9
81.9	197.0	3.7
82.3	173.0	3.1
82.9	169.1	3.0

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
71.3	169.5	3.1
71.6	195.6	3.8
72.0	176.3	3.3
72.3	178.8	3.3
72.6	181.7	3.4
72.9	180.0	3.4
73.3	181.0	3.4
73.6	186.5	3.6
73.9	170.7	3.1
74.2	189.4	3.6
74.6	186.4	3.6
74.9	177.1	3.3
75.2	200.0	4.0
75.6	191.7	3.7
75.9	192.4	3.7
76.2	193.7	3.8
76.5	190.7	3.7
76.9	192.4	3.7
77.2	188.3	3.6
77.5	191.0	3.7
77.8	194.2	3.8
78.2	198.2	3.9
78.5	191.7	3.7
78.8	195.6	3.8
79.2	173.7	3.2
79.5	187.2	3.6
79.8	196.8	3.9
80.1	171.7	3.1
80.5	184.9	3.5
80.8	193.2	3.8
81.1	185.5	3.5
81.4	193.1	3.7
81.8	178.9	3.3
82.1	181.0	3.4
82.4	180.8	3.4
82.8	175.0	3.2

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
83.3	186.1	3.4
83.6	196.8	3.7
83.9	210.1	4.1
84.2	194.9	3.7
84.6	187.7	3.5
84.9	205.1	4.0
85.2	189.1	3.5
85.5	192.9	3.6
85.9	196.0	3.7
86.2	205.5	4.0
86.5	176.8	3.2
86.9	191.5	3.6
87.2	195.5	3.7
87.5	197.6	3.8
87.8	180.8	3.3
88.2	200.8	3.9
88.5	177.4	3.2
88.8	183.2	3.4
89.1	170.0	3.0
89.5	201.6	3.9
89.8	177.1	3.2
90.1	182.4	3.3
90.5	191.6	3.6
90.8	164.8	2.8
91.1	166.9	2.9
91.4	192.1	3.6
91.8	197.9	3.8
92.1	176.8	3.2
92.4	181.3	3.3
92.7	181.3	3.3
93.1	166.3	2.9
93.4	200.8	3.9
93.7	176.6	3.2
94.1	189.2	3.5
94.4	165.3	2.9
94.7	188.4	3.5

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
83.1	183.2	3.5
83.4	176.6	3.3
83.7	183.8	3.5
84.1	181.9	3.4
84.4	173.2	3.2
84.7	185.5	3.5
85.0	198.2	3.9
85.4	178.7	3.3
85.7	184.8	3.5
86.0	174.7	3.2
86.4	174.1	3.2
86.7	164.7	2.9
87.0	159.2	2.8
87.3	167.8	3.0
88.3	181.3	3.4
88.6	182.9	3.5
89.0	175.8	3.2
89.3	184.7	3.5
89.6	168.2	3.0
90.0	194.5	3.8
90.3	186.9	3.6
90.6	179.5	3.4
90.9	161.0	2.8
91.3	172.4	3.1
91.6	183.6	3.5
91.9	168.5	3.0
92.2	176.1	3.3
92.6	168.4	3.0
92.9	153.5	2.6
93.2	184.1	3.5
93.6	184.1	3.5
93.9	172.7	3.2
94.2	196.3	3.8
94.5	160.5	2.8
94.9	160.3	2.8
95.2	172.5	3.2

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
95.0	207.4	4.1
95.4	160.3	2.7
95.7	197.4	3.8
96.0	180.0	3.3
96.3	176.1	3.2
96.7	206.1	4.0
97.0	187.9	3.5
97.3	211.2	4.2
97.7	178.7	3.2
98.0	187.9	3.5
98.3	192.6	3.6
98.6	191.6	3.6
99.0	167.1	2.9
99.3	213.3	4.2
99.6	188.5	3.5
99.9	194.5	3.7
100.3	209.2	4.1
100.6	182.4	3.3
100.9	180.0	3.3
101.3	196.8	3.7
101.6	201.3	3.9
101.9	196.5	3.7
102.2	194.7	3.7
102.6	190.3	3.6
102.9	201.1	3.9
103.2	195.8	3.7
103.5	192.0	3.6
103.9	237.6	5.0
104.2	192.4	3.6
104.5	176.0	3.2
104.9	211.3	4.2
105.2	201.1	3.9
105.5	200.8	3.9
105.8	198.9	3.8
106.2	210.1	4.1
106.5	193.9	3.7

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
95.5	161.9	2.9
95.8	179.0	3.3
96.2	152.4	2.6
96.5	152.7	2.6
96.8	175.1	3.2
97.2	166.1	3.0
97.8	165.1	2.9
98.1	149.0	2.5
98.5	164.1	2.9
98.8	171.8	3.1
99.1	190.7	3.7
99.4	173.4	3.2
99.8	179.5	3.4
100.1	167.1	3.0
100.4	198.5	3.9
100.8	194.2	3.8
101.1	177.9	3.3
101.4	197.6	3.9
101.7	195.8	3.8
102.1	208.3	4.2
102.4	188.2	3.6
102.7	192.7	3.7
103.1	175.4	3.2
103.4	188.1	3.6
103.7	172.9	3.2
104.0	170.9	3.1
104.4	180.8	3.4
104.7	193.2	3.8
105.0	179.7	3.4
105.3	189.4	3.6
105.7	201.3	4.0
106.0	182.9	3.4
106.3	185.1	3.5
106.7	175.3	3.2
107.0	213.3	4.4
107.3	192.9	3.7

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
106.8	211.6	4.2
107.1	202.7	3.9
107.5	208.4	4.1
107.8	209.3	4.1
108.1	204.5	4.0
108.5	194.9	3.7
108.8	222.6	4.5
109.1	222.9	4.5
109.4	216.8	4.3
109.8	198.9	3.8
110.1	195.3	3.7
110.4	210.4	4.1
110.7	225.9	4.6
111.1	230.4	4.8
111.4	213.4	4.2
111.7	234.9	4.9
112.4	243.5	5.2
112.7	212.0	4.2
113.0	218.2	4.4
113.4	253.6	5.5
113.7	250.0	5.4
114.0	247.6	5.3
114.3	253.7	5.5
114.7	232.3	4.8
115.0	243.5	5.2
115.3	252.4	5.5
115.7	229.7	4.7
116.0	233.7	4.9
116.3	291.8	6.9
116.6	266.7	6.0
117.0	258.4	5.7
117.3	255.5	5.6
117.6	267.1	6.0
117.9	278.7	6.4
118.3	276.0	6.3
118.6	284.4	6.6

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
107.6	188.8	3.6
108.0	198.2	3.9
108.3	193.7	3.8
108.6	184.5	3.5
108.9	191.8	3.7
109.3	217.7	4.5
109.6	180.8	3.4
109.9	193.5	3.8
110.3	188.2	3.6
110.6	238.9	5.2
110.9	204.8	4.1
111.6	202.8	4.0
111.9	208.9	4.2
112.2	223.1	4.7
112.5	207.1	4.2
112.9	219.7	4.6
113.2	242.3	5.3
113.5	210.0	4.3
113.9	220.5	4.6
114.2	200.5	4.0
114.5	230.0	4.9
114.8	217.1	4.5
115.2	229.7	4.9
115.5	240.8	5.3
115.8	239.7	5.2
116.1	231.2	4.9
116.5	243.8	5.4
116.8	256.6	5.8
117.1	250.0	5.6
117.5	245.3	5.4
117.8	255.0	5.7
118.1	237.0	5.1
118.8	267.1	6.2
119.1	251.2	5.6
119.4	256.6	5.8
119.7	253.5	5.7

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
118.9	264.8	5.9
119.6	284.5	6.6
119.9	267.6	6.0
120.2	262.9	5.8
120.6	272.6	6.2
120.9	282.4	6.5
121.2	311.1	7.6
121.6	297.6	7.1
121.9	264.2	5.9
122.2	320.0	7.9
122.5	301.8	7.2
122.9	298.4	7.1
123.2	312.7	7.6
123.5	328.7	8.2
123.8	301.6	7.2
124.2	330.6	8.3
124.5	284.9	6.6
124.8	333.2	8.4
125.2	290.1	6.8
125.5	292.1	6.9
125.8	273.5	6.2
126.1	292.8	6.9
126.5	302.6	7.3
126.8	324.4	8.1
127.1	306.3	7.4
127.4	331.9	8.4
127.8	318.7	7.9
128.1	359.5	9.4
128.4	361.1	9.5
128.8	349.2	9.0
129.1	340.3	8.7
129.4	358.7	9.4
129.7	341.6	8.7
130.1	337.9	8.6
130.4	377.4	10.2
130.7	361.1	9.5

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
120.1	263.3	6.0
120.4	246.4	5.5
120.7	257.2	5.8
121.1	301.3	7.4
121.4	278.2	6.6
121.7	294.7	7.2
122.0	281.6	6.7
122.4	276.5	6.5
122.7	251.6	5.6
123.0	273.7	6.4
123.3	273.5	6.4
123.7	258.4	5.9
124.0	260.0	5.9
124.3	253.7	5.7
124.7	255.7	5.8
125.0	272.6	6.4
125.3	287.0	6.9
125.6	283.6	6.8
126.0	296.9	7.3
126.3	301.8	7.4
126.6	292.4	7.1
126.9	293.9	7.2
127.3	287.2	6.9
127.6	284.5	6.8
127.9	288.4	6.9
128.3	304.0	7.5
128.6	337.5	8.8
128.9	296.3	7.2
129.2	319.0	8.1
129.6	288.8	7.0
129.9	337.9	8.9
130.2	305.5	7.6
130.5	314.9	7.9
130.9	327.9	8.5
131.2	339.2	8.9
131.5	320.0	8.1

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
131.0	332.7	8.4
131.4	378.2	10.2
131.7	371.1	9.9
132.0	337.9	8.6
132.4	391.6	10.8
132.7	358.4	9.4
133.0	367.4	9.8
133.3	364.9	9.7
133.7	366.3	9.7
134.0	384.4	10.5
134.3	392.9	10.8
134.6	407.6	11.5
135.0	387.9	10.6
135.3	397.6	11.0
135.6	424.4	12.2
136.0	422.6	12.1
136.3	446.1	13.2
136.6	400.5	11.2
136.9	428.3	12.4
137.3	444.2	13.1
137.6	455.3	13.6
137.9	426.3	12.3
138.2	467.0	14.1
138.6	431.6	12.5
138.9	445.8	13.2
139.2	420.5	12.0
139.6	427.9	12.3
139.9	486.6	15.0
140.2	488.1	15.1
140.5	464.2	14.0
140.9	476.1	14.5
141.2	484.5	14.9
141.5	503.9	15.9
141.8	510.8	16.2
142.2	506.5	16.0
142.5	510.0	16.2

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
131.9	321.3	8.2
132.2	324.4	8.3
132.5	324.9	8.3
132.8	361.3	9.8
133.2	365.0	10.0
133.5	339.7	8.9
133.8	350.9	9.4
134.1	352.5	9.5
134.5	362.3	9.9
134.8	339.5	8.9
135.1	354.7	9.5
135.5	404.6	11.7
135.8	404.9	11.7
136.1	408.6	11.9
136.4	403.8	11.7
136.8	385.8	10.9
137.1	385.5	10.9
137.4	412.1	12.0
138.1	430.4	12.9
138.7	407.1	11.8
139.1	440.8	13.3
139.4	443.7	13.5
139.7	428.9	12.8
140.0	459.5	14.2
140.4	464.3	14.4
140.7	445.1	13.5
141.0	458.0	14.1
141.3	452.0	13.9
141.7	453.3	13.9
142.0	459.8	14.2
142.3	470.9	14.8
142.7	463.2	14.4
143.0	462.1	14.3
143.3	469.5	14.7
143.6	476.4	15.0
144.0	528.9	17.6

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
142.8	525.5	16.9
143.2	539.7	17.6
143.5	510.0	16.2
143.8	515.8	16.5
144.1	540.8	17.7
144.5	508.8	16.1
144.8	549.5	18.1
145.1	563.2	18.8
145.4	591.4	20.3
145.8	617.6	21.7
146.1	642.9	23.1
146.4	630.1	22.4
146.8	690.1	25.7
147.1	698.0	26.2
147.4	682.6	25.3
147.7	673.1	24.8
148.1	666.8	24.4
148.4	613.7	21.5
148.7	605.0	21.0
149.0	618.2	21.7
149.4	551.8	18.3
149.7	564.0	18.9
150.0	521.3	16.7
150.4	527.9	17.1
150.7	528.6	17.1
151.0	473.4	14.4
151.3	475.4	14.5
151.7	442.5	13.0
152.0	467.9	14.2
152.3	457.5	13.7
152.6	475.3	14.5
153.0	478.2	14.7
153.3	454.4	13.5
153.6	458.2	13.7
154.0	476.2	14.6
154.3	443.3	13.0

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
144.3	534.8	17.9
144.6	552.9	18.9
144.9	578.8	20.3
145.3	560.0	19.3
145.6	577.5	20.2
145.9	635.3	23.4
146.3	580.0	20.3
146.6	541.0	18.3
146.9	562.8	19.4
147.2	531.4	17.8
147.6	522.7	17.3
147.9	524.8	17.4
148.2	482.7	15.3
148.5	467.3	14.6
148.9	450.2	13.8
149.2	428.3	12.8
149.5	416.0	12.2
149.9	399.3	11.5
150.2	385.4	10.8
150.5	385.0	10.8
150.8	400.5	11.5
151.2	415.4	12.2
151.5	416.8	12.2
151.8	407.8	11.8
152.1	395.2	11.3
152.5	367.3	10.1
152.8	392.5	11.2
153.1	385.7	10.9
153.5	389.5	11.0
153.8	358.2	9.7
154.1	384.7	10.8
154.4	370.6	10.2
154.8	380.3	10.6
155.1	347.0	9.2
155.4	381.0	10.7
155.7	340.3	9.0

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
154.6	411.5	11.6
154.9	423.8	12.2
155.3	426.1	12.3
155.6	412.6	11.7
155.9	413.3	11.7
156.2	427.3	12.3
156.6	400.8	11.2
156.9	387.7	10.6
157.2	415.4	11.8
157.6	368.5	9.8
157.9	381.5	10.4
158.2	371.8	10.0
158.5	401.0	11.2
158.9	401.0	11.2
159.2	371.3	9.9
159.5	371.5	9.9
159.8	391.8	10.8
160.2	404.1	11.3
160.5	392.2	10.8
160.8	391.9	10.8
161.2	423.8	12.2
161.5	397.7	11.0
161.8	381.8	10.4
162.1	389.4	10.7
162.5	387.9	10.6
162.8	389.9	10.7
163.1	362.8	9.6
163.4	402.1	11.2
163.8	392.1	10.8
164.1	430.9	12.5
164.4	412.6	11.7
164.8	412.9	11.7
165.1	423.3	12.1
165.4	383.3	10.4
165.7	412.6	11.7
166.1	409.9	11.6

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
156.1	332.8	8.7
156.4	324.1	8.3
156.7	337.7	8.9
157.1	339.5	8.9
157.4	388.8	11.0
157.7	370.8	10.2
158.0	351.2	9.4
158.4	374.7	10.4
158.7	363.0	9.9
159.0	359.8	9.8
159.3	350.2	9.4
159.7	331.8	8.6
160.0	349.8	9.3
160.3	360.5	9.8
160.7	365.5	10.0
161.0	363.5	9.9
161.3	354.5	9.5
161.6	365.3	10.0
162.0	344.3	9.1
162.3	360.3	9.8
162.6	351.6	9.4
162.9	355.3	9.6
163.3	366.3	10.0
163.6	366.8	10.1
163.9	337.7	8.9
164.3	369.6	10.2
164.6	368.5	10.1
164.9	355.7	9.6
165.2	340.7	9.0
165.6	359.5	9.7
165.9	334.0	8.7
166.2	344.0	9.1
166.5	335.4	8.8
166.9	368.5	10.1
167.2	340.0	8.9
167.5	359.5	9.7

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
166.4	382.3	10.4
166.7	397.5	11.0
167.0	413.8	11.7
167.4	396.2	11.0
167.7	387.9	10.6
168.0	394.0	10.9
168.4	370.8	9.9
168.7	359.5	9.4
169.0	430.0	12.4
169.3	393.4	10.9
169.7	422.3	12.1
170.0	383.3	10.4
170.3	403.5	11.3
170.6	381.3	10.3
171.0	389.6	10.7
171.3	355.9	9.3
171.6	388.2	10.6
172.0	402.3	11.2
172.3	358.0	9.4
172.6	394.4	10.9
172.9	401.0	11.2
173.3	407.9	11.5
173.6	416.7	11.9
173.9	379.0	10.2
174.2	391.0	10.8
174.6	388.1	10.6
175.2	389.6	10.7
175.6	416.4	11.8
175.9	404.6	11.3
176.2	415.9	11.8
176.5	396.9	11.0
176.9	420.8	12.0
177.2	426.2	12.3
177.5	424.4	12.2
177.8	407.7	11.5
178.2	424.9	12.2

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
167.9	352.6	9.5
168.2	330.1	8.5
168.5	353.8	9.5
168.8	317.5	8.1
169.2	360.3	9.8
169.5	351.0	9.4
169.8	345.9	9.2
170.2	365.6	10.0
170.5	367.7	10.1
170.8	357.8	9.7
171.1	351.1	9.4
171.5	347.4	9.2
171.8	336.2	8.8
172.1	346.0	9.2
172.4	365.9	10.0
172.8	369.8	10.2
173.1	391.4	11.1
173.4	333.6	8.7
173.8	343.8	9.1
174.1	346.9	9.2
174.4	348.6	9.3
174.7	349.6	9.3
175.1	349.6	9.3
175.7	382.7	10.7
176.0	346.4	9.2
176.4	361.9	9.8
176.7	368.9	10.1
177.0	346.3	9.2
177.4	357.6	9.7
177.7	365.3	10.0
178.0	377.9	10.5
178.3	397.4	11.4
178.7	355.4	9.6
179.0	382.8	10.7
179.3	377.0	10.5
179.6	382.3	10.7

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
178.5	441.3	12.9
178.8	415.9	11.8
179.2	377.7	10.2
179.5	436.5	12.7
179.8	432.6	12.6
180.1	416.9	11.9
180.5	416.7	11.9
180.8	441.3	12.9
181.1	440.3	12.9
181.4	385.1	10.5
181.8	445.3	13.1
182.1	397.7	11.0
182.4	450.4	13.4
182.8	442.3	13.0
183.1	439.2	12.9
183.4	487.9	15.1
183.7	426.3	12.3
184.1	468.1	14.2
184.4	461.0	13.8
184.7	426.7	12.3
185.0	458.0	13.7
185.4	430.9	12.5
185.7	471.3	14.3
186.0	457.7	13.7
186.4	450.9	13.4
186.7	485.6	15.0
187.0	484.9	15.0
187.3	471.4	14.3
187.7	462.3	13.9
188.0	490.4	15.2
188.3	461.8	13.9
188.7	451.0	13.4
189.0	490.6	15.2
189.3	480.8	14.8
189.6	499.7	15.7
190.0	447.8	13.2

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
180.0	397.3	11.4
180.3	386.1	10.9
180.6	401.8	11.6
181.0	390.8	11.1
181.3	387.4	10.9
181.6	345.9	9.2
181.9	416.1	12.2
182.3	391.2	11.1
182.6	352.5	9.5
182.9	383.2	10.8
183.2	437.7	13.2
183.6	382.8	10.7
183.9	401.1	11.5
184.2	380.5	10.6
184.6	426.1	12.7
184.9	423.7	12.5
185.2	445.8	13.6
185.5	403.6	11.6
185.9	446.9	13.6
186.2	400.8	11.5
186.5	424.2	12.6
186.8	453.4	13.9
187.2	421.6	12.4
187.5	446.4	13.6
187.8	413.4	12.1
188.2	405.8	11.7
188.5	416.9	12.2
188.8	451.9	13.9
189.1	451.8	13.8
189.5	450.1	13.8
189.8	429.9	12.8
190.1	489.2	15.6
190.4	436.3	13.1
190.8	414.2	12.1
191.1	414.7	12.1
191.4	402.4	11.6

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
190.3	499.0	15.6
190.6	470.1	14.3
190.9	485.6	15.0
191.3	506.2	16.0
191.6	465.6	14.1
191.9	475.9	14.5
192.3	491.9	15.3
192.9	514.2	16.4
193.2	485.1	15.0
193.6	445.1	13.1
193.9	471.3	14.3
194.2	460.0	13.8
194.5	457.8	13.7
194.9	500.0	15.7
195.2	479.3	14.7
195.5	437.0	12.8
195.9	449.9	13.3
196.2	475.7	14.5
196.5	445.3	13.1
196.8	470.1	14.3
197.2	457.7	13.7
197.5	452.9	13.5
197.8	458.2	13.7
198.1	451.6	13.4
198.5	471.1	14.3
198.8	451.3	13.4
199.1	460.5	13.8
199.5	448.0	13.3
199.8	424.9	12.2
200.1	496.2	15.5
200.4	466.3	14.1
200.8	418.0	11.9
201.1	460.0	13.8
201.4	455.4	13.6
201.7	435.7	12.7
202.1	466.1	14.1

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
191.8	403.4	11.6
192.1	407.9	11.8
192.4	415.6	12.2
192.7	415.5	12.2
193.1	435.3	13.1
193.4	465.3	14.5
193.7	430.1	12.8
194.0	407.4	11.8
194.4	418.4	12.3
194.7	416.6	12.2
195.0	430.9	12.9
195.4	398.4	11.4
195.7	377.4	10.5
196.0	417.1	12.2
196.3	412.1	12.0
196.7	416.6	12.2
197.0	404.7	11.7
197.3	413.4	12.1
197.6	410.3	11.9
198.0	403.2	11.6
198.3	411.7	12.0
198.6	409.4	11.9
199.0	381.8	10.7
199.3	415.1	12.2
199.6	401.8	11.6
199.9	422.9	12.5
200.3	406.0	11.7
200.6	427.9	12.7
200.9	393.3	11.2
201.2	405.7	11.7
201.6	381.0	10.7
201.9	412.8	12.1
202.2	394.4	11.2
202.6	423.2	12.5
202.9	404.7	11.7
203.2	397.7	11.4

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
202.4	416.2	11.8
202.7	477.0	14.6
203.1	457.5	13.7
203.4	476.7	14.6
203.7	441.5	13.0
204.0	433.4	12.6
204.4	438.0	12.8
204.7	455.7	13.6
205.0	435.0	12.7
205.3	442.0	13.0
205.7	452.8	13.5
206.0	445.0	13.1
206.3	423.8	12.2
206.7	467.3	14.1
207.0	444.3	13.1
207.3	441.5	13.0
207.6	441.3	12.9
208.0	442.0	13.0
208.3	425.0	12.2
208.6	468.0	14.2
208.9	454.0	13.5
209.3	478.8	14.7
209.6	445.8	13.2
209.9	458.8	13.7
210.3	423.5	12.2
210.6	422.8	12.1
210.9	425.9	12.3
211.2	433.2	12.6
211.6	451.4	13.4
211.9	464.7	14.0
212.2	401.7	11.2
212.5	396.5	11.0
212.9	449.5	13.3
213.2	425.7	12.3
213.5	422.9	12.1
213.9	440.0	12.9

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
203.5	395.5	11.3
203.9	375.9	10.4
204.2	395.3	11.3
204.5	405.5	11.7
204.8	415.7	12.2
205.2	401.8	11.6
205.5	417.1	12.2
205.8	389.5	11.0
206.2	394.8	11.3
206.5	405.2	11.7
206.8	396.2	11.3
207.1	383.8	10.8
207.5	402.5	11.6
207.8	398.4	11.4
208.1	376.7	10.5
208.4	392.3	11.1
208.8	411.0	12.0
209.1	404.4	11.7
209.4	399.7	11.5
209.8	385.1	10.8
210.4	392.3	11.1
210.7	405.3	11.7
211.1	383.3	10.8
211.4	366.3	10.0
211.7	393.0	11.2
212.0	391.5	11.1
212.4	382.3	10.7
212.7	405.8	11.7
213.0	383.3	10.8
213.4	401.0	11.5
213.7	405.1	11.7
214.0	374.4	10.4
214.3	400.0	11.5
214.7	404.7	11.7
215.0	407.4	11.8
215.3	368.9	10.1

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
214.2	452.3	13.5
214.5	418.5	11.9
214.8	417.0	11.9
215.2	436.8	12.7
215.5	412.3	11.7
215.8	404.9	11.3
216.1	471.1	14.3
216.5	406.4	11.4
216.8	439.3	12.9
217.1	439.8	12.9
217.5	449.1	13.3
217.8	404.2	11.3
218.1	413.6	11.7
218.4	431.0	12.5
218.8	472.8	14.4
219.1	401.3	11.2
219.4	445.2	13.1
219.7	433.3	12.6
220.1	417.3	11.9
220.4	413.1	11.7
220.7	441.5	13.0
221.1	440.0	12.9
221.4	416.5	11.8
221.7	441.2	12.9
222.0	429.3	12.4
222.4	399.5	11.1
222.7	398.3	11.1
223.0	409.1	11.5
223.3	436.0	12.7
223.7	417.8	11.9
224.0	447.7	13.2
224.3	439.8	12.9
224.7	424.2	12.2
225.0	407.7	11.5
225.3	435.3	12.7
225.6	421.3	12.1

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
215.6	376.5	10.5
216.0	399.0	11.4
216.3	402.6	11.6
216.6	382.3	10.7
217.0	387.4	10.9
217.3	404.4	11.7
217.6	399.0	11.4
217.9	407.8	11.8
218.3	389.1	11.0
218.6	381.8	10.7
218.9	398.7	11.4
219.2	387.7	10.9
219.6	384.0	10.8
219.9	365.1	10.0
220.2	402.5	11.6
220.6	401.6	11.6
220.9	355.9	9.6
221.2	363.2	9.9
221.5	377.1	10.5
221.9	395.3	11.3
222.2	381.0	10.7
222.5	377.4	10.5
222.8	415.4	12.2
223.2	388.6	11.0
223.5	392.8	11.2
223.8	403.7	11.6
224.2	405.5	11.7
224.5	408.7	11.9
224.8	394.8	11.3
225.1	389.0	11.0
225.5	403.1	11.6
225.8	395.4	11.3
226.1	402.6	11.6
226.4	389.0	11.0
226.8	418.7	12.3
227.1	411.5	12.0

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
226.0	458.8	13.7
226.3	443.0	13.0
226.6	445.2	13.1
226.9	430.5	12.5
227.3	428.3	12.4
227.6	450.5	13.4
227.9	425.3	12.2
228.3	469.8	14.3
228.6	455.3	13.6
228.9	416.8	11.9
229.2	454.5	13.5
229.6	450.6	13.4
229.9	426.3	12.3
230.2	432.3	12.5
230.5	444.3	13.1
230.9	415.3	11.8
231.2	432.5	12.6
231.5	462.3	13.9
231.9	458.5	13.7
232.2	450.0	13.3
232.5	430.8	12.5
232.8	464.6	14.0
233.2	459.5	13.8
233.5	430.8	12.5
233.8	432.2	12.5
234.1	446.1	13.2
234.5	480.5	14.8
234.8	455.3	13.6
235.1	452.9	13.5
235.5	467.6	14.2
235.8	428.3	12.4
236.1	434.9	12.7
236.4	489.3	15.2
236.8	499.5	15.7
237.1	495.5	15.5
237.4	460.3	13.8

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
227.4	420.5	12.4
227.8	406.9	11.8
228.1	384.6	10.8
228.4	393.5	11.2
228.7	369.4	10.2
229.4	398.0	11.4
229.7	394.7	11.3
230.0	405.9	11.7
230.4	390.8	11.1
230.7	426.8	12.7
231.0	386.4	10.9
231.4	412.9	12.1
231.7	403.3	11.6
232.0	408.4	11.9
232.3	395.6	11.3
232.7	395.4	11.3
233.0	416.7	12.2
233.3	434.1	13.0
233.6	409.7	11.9
234.0	429.1	12.8
234.3	410.3	11.9
234.6	415.7	12.2
235.0	415.3	12.2
235.3	416.1	12.2
235.6	415.4	12.2
235.9	438.3	13.2
236.3	429.6	12.8
236.6	389.6	11.0
236.9	396.5	11.3
237.3	402.9	11.6
237.6	405.1	11.7
237.9	399.5	11.5
238.2	424.6	12.6
238.6	430.9	12.9
238.9	417.9	12.3
239.2	483.1	15.3

Table C-1.0-2 (continued)

Second Quarter FY2007		
Depth (ft)	CPS	% Moisture
237.7	446.1	13.2
238.1	495.7	15.5
238.4	480.5	14.8
238.7	465.6	14.1
239.1	428.3	12.4
239.4	457.7	13.7
239.7	463.0	13.9
240.0	454.7	13.6
240.4	480.3	14.7
240.7	506.5	16.0
241.0	460.0	13.8
241.3	436.2	12.7
241.7	431.6	12.5
242.0	477.4	14.6
242.3	461.5	13.9
242.7	473.9	14.4
243.0	470.8	14.3
243.3	496.5	15.5
243.6	483.8	14.9
244.0	525.4	16.9
244.3	541.8	17.7
244.6	538.2	17.6
244.9	550.5	18.2
245.3	564.9	18.9
245.6	598.0	20.7
245.9	553.4	18.3
246.3	585.3	20.0
246.6	549.5	18.1
246.9	575.9	19.5
247.2	613.2	21.5
247.6	29.6	0.2

Third Quarter FY2007		
Depth (ft)	CPS	% Moisture
239.5	402.5	11.6
239.9	399.0	11.4
240.2	380.8	10.6
240.5	446.3	13.6
240.9	420.2	12.4
241.2	440.8	13.3
241.5	416.2	12.2
241.8	455.6	14.0
242.2	446.9	13.6
242.5	469.5	14.7
242.8	513.3	16.8
243.1	498.5	16.1
243.5	500.3	16.2
243.8	512.8	16.8
244.1	506.8	16.5
244.5	500.3	16.2
244.8	491.0	15.7
245.1	497.5	16.1
245.4	503.1	16.3
245.8	516.4	17.0
246.1	543.3	18.4
246.4	517.1	17.0
246.7	550.3	18.7
247.1	505.1	16.4
247.4	506.9	16.5
247.7	526.4	17.5
248.1	494.9	15.9
248.4	518.5	17.1
248.7	469.1	14.7
249.0	450.5	13.8
249.4	442.9	13.4
249.7	476.6	15.0
250.0	460.0	14.2
250.3	479.6	15.2
250.7	41.1	0.3