SOIL & MATERIAL ENGINEERS INC. ENGINEERING-TESTING-INSPECTION

125 London Rd., Box 15153, Biltmore Sta., Asheville, NC 28813-0153, Ph. (704) 274-7800

February 29, 1984

Mr. Woody Hampton, County Planner
Jackson County
County Administration Building
8 Ridgeway Street
Sylva, N.C. 28779

Re: Jackson County Landfill
Dillsboro, N.C.

Dear Mr. Hampton:

Soil & Material Engineers, Inc. has completed the auger borings at the Jackson County Landfill in Dillsboro, N.C.

A total of nine auger borings were drilled at the loacations shown on the attached site plan. In general, the auger borings ranged from twenty foot to forty-five foot depths. The soils consist of a brown micaceous silty fine sand. No rock was encountered in any of the borings at the locations shown. Attached is an itemized sheet indicating boring numbers and depths.

We appreciate the opportunity to be of service to you; any questions, please advise.

Very truly yours,

Soil & Material Engineers, Inc.

Richard A. Gilstrap
Construction Services Manager

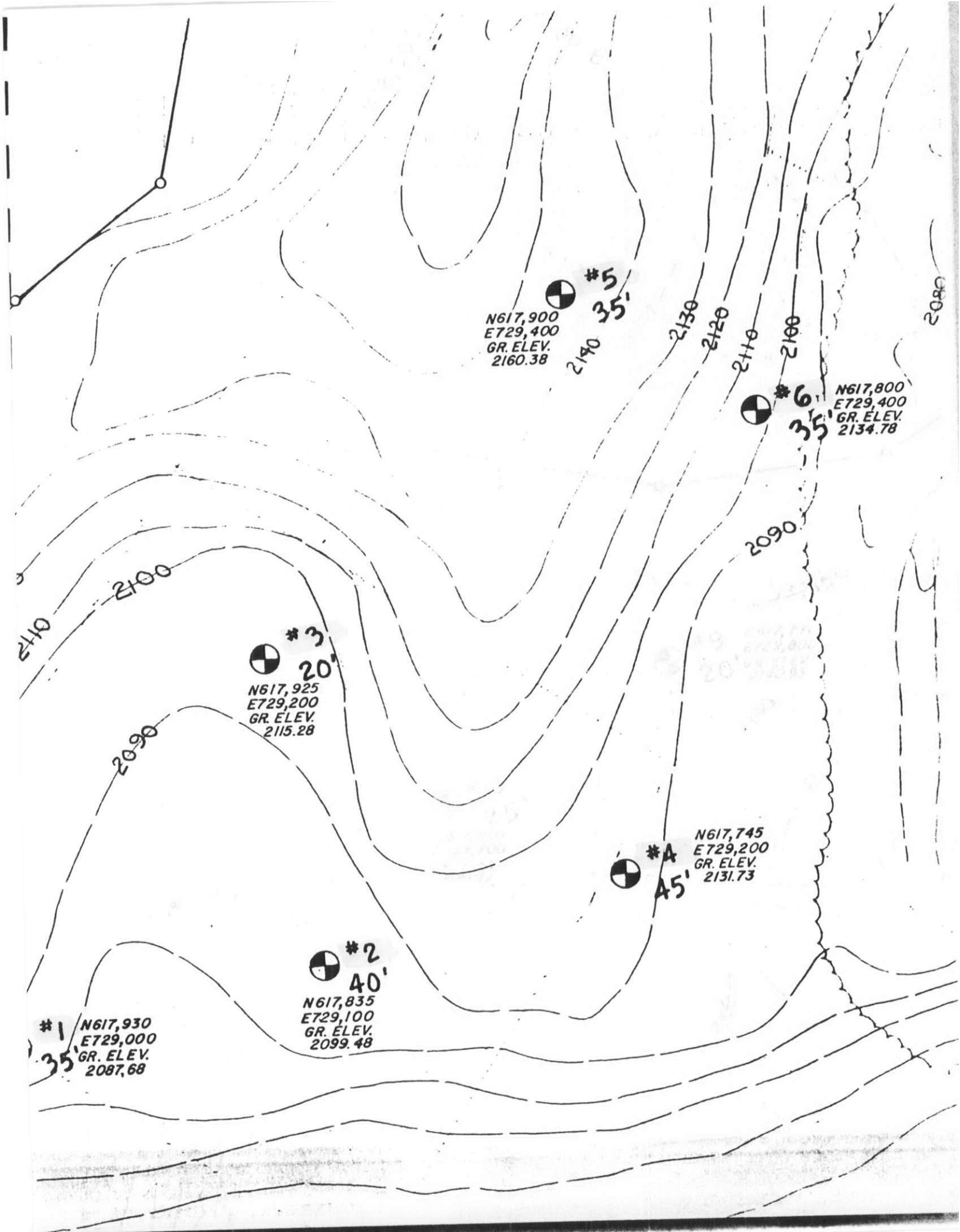
J.C. Bumgarner, P.E.
Branch Manager

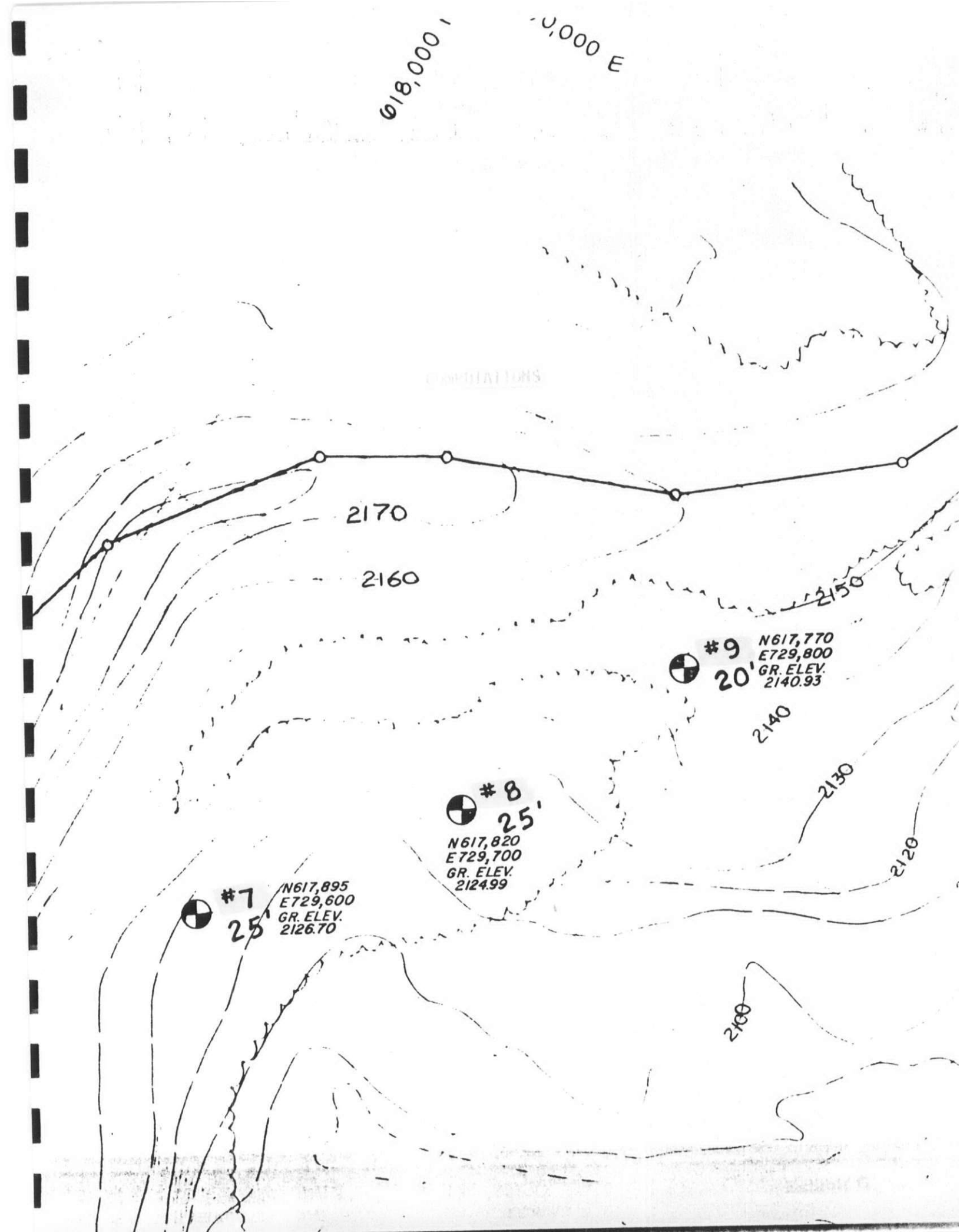
RAG:JCB/dh

Enclosure

JACKSON CO. L.F.

BORING NUMBER	DEPTH
B-1	35'
B-2	40'
B-3	20'
B-4	45'
B-5	35'
B-6	35'
B-7	25'
B-8	25'
B-9	20'


#5
35'
N617,900
E729,400
GR. ELEV.
2160.38
#6
35'
N617,800
E729,400
GR. ELEV.
2134.78
#3
20'
N617,925
E729,200
GR. ELEV.
2115.28
#4
45'
N617,745
E729,200
GR. ELEV.
2131.73
#2
40'
N617,835
E729,100
GR. ELEV.
2099.48
#1
35'
N617,930
E729,000
GR. ELEV.
2087.68
2140
2130
2120
2110
2100
2090
2080
2100
2110
2090


618,000
E
2170
2160
2150
2140
2130
2120
2100
#9
N617,770
E729,800
20'
GR. ELEV.
2140.93
#8
25'
N617,820
E729,700
GR. ELEV.
2124.99
#7
N617,895
E729,600
25'
GR. ELEV.
2126.70

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

January 27, 1992

MEMORANDUM

TO: Jim Coffey and Ellis Cayton

FROM: Bobby Lutfy, Hydrogeologist B.L.

RE: Evaluation Of Ground Water Monitoring System For The Jackson County Landfill (Permit # 50-02)

After reviewing the files and making a field investigation, it has been found that the existing ground water monitoring system at the Jackson County Landfill is not adequate to "detect the effects of the facility on the ground water of the area". The monitoring system should be upgraded as soon as possible.

The Well Completion Records on file do not give adequate documentation regarding the design of the existing monitoring wells. The well in the middle of the downgradient part of the landfill site was damaged at one time in the past, and according to a letter from our office dated May 8, 1987, this well was to be replaced. This well also has often had an inadequate amount of water to provide a representative sample. Therefore this well should be replaced with a properly designed and constructed well in the same location. The existing well should then be abandoned according to the Division of Environmental Management's permanent well abandonment procedures.

An upgradient well must be established for this site. Access is now possible to the upper portion of the site that would make installation of an upgradient well possible. Another downgradient well needs to be established in the draw on the West portion of the site below the current area of operation.

A downgradient well also needs to be established below the pulp/ash fill at the southern end of the site. This well may be located either immediately below this fill area and above the road or below the road. Although access to install this well will be difficult, it is important that at least one monitoring well be located below the pulp/ash fill area.

All of the new monitoring wells must be designed and constructed according to current design standards as delineated in the "North Carolina Water Quality Monitoring Guidance Document For Solid Waste Facilities". The wells should be screened at the water table and designed to allow for seasonal fluctuations in the water table. Jackson County should hire a environmental consultant with experience in the design and installation of monitoring wells to do this work. A Monitoring Plan to update the Jackson County ground water monitoring system should be approved by the Solid Waste Section prior to the installation of the new wells.

Jackson County is also required to do surface water monitoring both upstream and downstream of the landfill site. The ground and surface water sampling locations are to be sampled at least on a semi-annual basis.

N. C. Department of Human Resources
Division of Health Services

WELL COMPLETION RECORD

BC 330

COMPLETE ALL INFORMATION REQUESTED BELOW FOR EACH WELL INSTALLED, AND RETURN FORM TO THE N.C. DEPARTMENT OF HUMAN RESOURCES, SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH, P. O. BOX 2091, RALEIGH, N.C. 27602

NAME OF SITE:	PERMIT NO.:
Jackson County Landfill MW-2 X±	50-02
ADDRESS:	**OWNER (print):**
Old US 441 Dillsboro, NC 28725	County of Jackson
DRILLING CONTRACTOR:	**REGISTRATION NO.:**
Greene Brothers Well Drilling & Pump Service	

Casing Type: Sch. 40 PVC dia. 2 in. Grout Depth: ? from ____ to ____ ft. - dia. ____ in.
Casing Depth: from 0 to 54 ft. - dia. 2 in. Bentonite Seal: ? from 2 to ____ ft. - dia. ____ in.
Screen Type: Sch. 40 PVC slotted dia. ____ in. Sand/Gravel PK: ? from ____ to ____ ft. - dia. ____ in.
Screen Depth: from 44 to 54 ft. - dia. ____ in. Total Well Depth: from 0 to 54 ft. - dia. 2 in.

Static Water Level: 48 ± feet from ~~top of casing~~ G.S. Date Measured ____ / ____ / ____

Yield (gpm): ____ Method of Testing: ____ Casing is ____ feet above land surface

DRILLING LOG		
DEPTH FROM	TO	FORMATION DESCRIPTION
		?

LOCATION SKETCH

(show distance to numbered roads, or other map reference points)

REMARKS: ____

DATE: 10/12/89 SIGNATURE: Tom L. Massie

Tom L. Massie

LHS 3342 (6/85)
Solid & Hazardous Waste Management Branch

N. C. Department of Human Resources
Division of Health Services

WELL COMPLETION RECORD

COMPLETE ALL INFORMATION REQUESTED BELOW FOR EACH WELL INSTALLED, AND RETURN FORM TO THE N.C. DEPARTMENT OF HUMAN RESOURCES, SOLID AND HAZARDOUS WASTE MANAGEMENT BRANCH
P. O. BOX 2091, RALEIGH, N.C. 27602

NAME OF SITE:	PERMIT NO.:
Jackson County Landfill MW-1 X ±	50-02
ADDRESS: Old US 441 Dillsboro, NC 28725	OWNER (print): County of Jackson
DRILLING CONTRACTOR: Greene Brothers Well Drilling & Pump Service	REGISTRATION NO.:

Casing Type: sch. 40 PVC dia. 2 in. Grout Depth: ? from ____ to ____ ft. - dia. ____ in
Casing Depth: from 0 to 79 ft. - dia. 2 in. Bentonite Seal: ? from ____ to ____ ft. - dia. ____ in
Screen Type: slotted sch. 40 PVC dia. ____ in. Sand/Gravel PK: ? from ____ to ____ ft. - dia. ____ in
Screen Depth: from 69 to 79 ft. - dia. ____ in. Total Well Depth: from 0 to 79 ft. - dia. 2 in

Static Water Level: 47 ± feet from ~~top of casing~~ G.S. Date Measured ____ / ____ / ____

Yield (gpm): ____ Method of Testing: ____ Casing is ____ feet above land surface

DRILLING LOG		
DEPTH FROM	TO	FORMATION DESCRIPTION
	?	

LOCATION SKETCH
(show distance to numbered roads, or other map reference points)

REMARKS: ____

DATE: 10/12/89 SIGNATURE: Tom L. Massie
Tom L. Massie

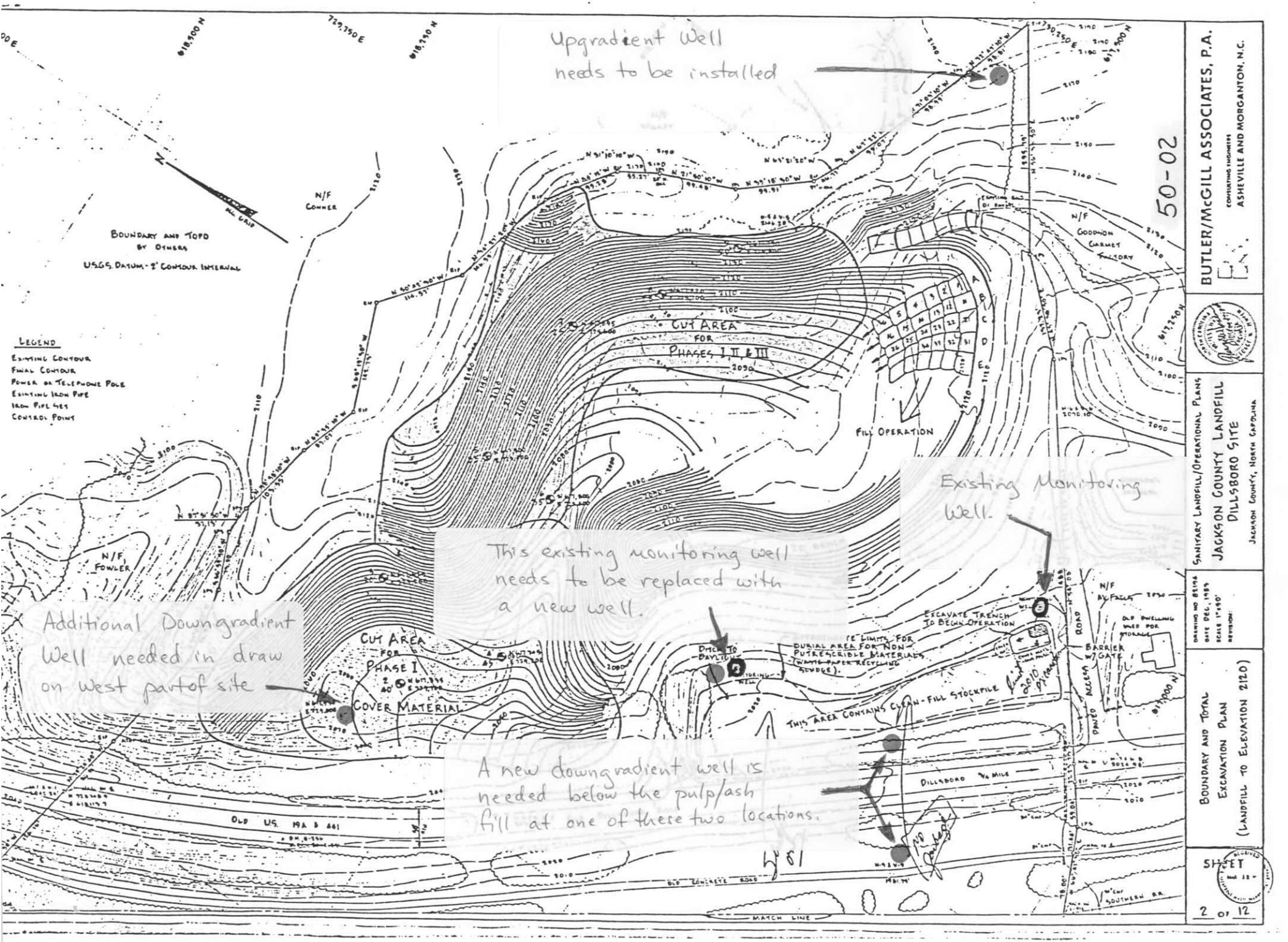
DHS 3342 (6/85)
Solid & Hazardous Waste Management Branch

JACKSON CO. L.F.
50-02

and Community Development. Specific population information was obtained from the Southwestern Planning and Development Commission (Region A), shown on Exhibits C. The present population of Jackson County is approximately 25,950 people. Because of the existance of the Cullowhee landfill it is expected that approximately 50 percent of the county's population use the Dillsboro landfill.

C. Site Topography and Soils Limitations

The present site is located in an elevated, well drained area. The majority of the surface drainage is carried southwestward to the Tuckasegee River by diversion ditches and pipe. The site is subject only to runoff from precipitation with no adjoining drainage onto the site. Soil borings were performed by Soil & Material Engineers, Inc. and information on results are included in Exhibit F. It is important to note that no water was encountered in any of the borings which ranged in depth from 20 to 45 feet. All borings were taken to proposed depth with no rock encountered. The soils consist of brown micaceous silty fine sands which when properly compacted should provide a good cover material to limit water intrusion of the completed cells leading to undesirable leachate from the landfill.



LOCATION ON BACK →