

Macklenburg Co.

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James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary



DIVISION OF SOLID WASTE MANAGEMENT

December 20, 1995

Mr. Larry Griffin
c/o North Mecklenburg Landfill, Inc.
15300 Holbrooks Road
Huntersville, North Carolina 28078

RE: North Mecklenburg Landfill, Inc. - F/F
Permit No. 60-13

Dear Mr. Griffin:

During the morning of December 18, 1995, Mr. Julian Foscue, Western Regional Supervisor, Solid Waste Section, and I inspected the North Mecklenburg Construction and Demolition Landfill, Permit No. 60-13.

The inspection was in response to a written complaint of December 8, 1995 from Mr. Robert T. Council to Mrs. Jan D. McHargue, P.E., Solid Waste Section. The complaint addressed the following four areas of concern:

1. Dumping C & D Waste within the 500 ft. boundary separating the dumping area between dwellings and wells,
2. The need for 6" weekly cover over all waste,
3. Wind blown material, and
4. Off-site erosion.

We observed we styrofoam waste in one compact area that was temporarily staged to prevent wind from moving it and to allow it time to dry. No other C & D Waste was observed within the 500 ft. boundary. Permit Condition No. (4)(a) Cover Material Requirements requires that all solid waste be covered with at least 6" of compacted soil once per week. It is our understanding that excavation of soil for weekly cover has been delayed due to certain adverse operating conditions. Weekly cover should now be adhered to without further delay. There was no significant off-site erosion observed; however, there was significant on-site erosion that needs to be corrected as soon as possible. Seeding and reworking of slopes is necessary in some areas.

Mr. Larry Griffin
December 20, 1995
Page Two

If there are any questions, please do not hesitate to contact me at (704) 663-1699.

Sincerely,



Rick Doby, Sr.
Waste Management Specialist

cc: Julian Foscue
~~Phil Brate~~ - F/F
John Gibson

CRD/kr

Facility
File 2

Talked
to Jan
show will call
DM

HELMS, CANNON, HAMEL & HENDERSON

PROFESSIONAL ASSOCIATION

ATTORNEYS AT LAW

SUITE 2300, TWO FIRST UNION CENTER
CHARLOTTE, NORTH CAROLINA 28282

CHARLES J. HENDERSON
(RETIRED)

THOMAS G. LANE, JR.
(RETIRED)

TELEPHONE (704) 372-4884
TELECOPIER (704) 332-0585

H. PARKS HELMS
THOMAS R. CANNON
WILLIAM F. HAMEL
DAVID L. HENDERSON
CHRISTIAN R. TROY
BRUCE L. JAMES
WILLIAM B. HAMEL
GENA H. GRAHAM

April 6, 1995



Mr. Dexter Matthews
Solid Waste Section
North Carolina Department of Environment,
Health and Natural Resources
P. O. Box 27687
Raleigh, North Carolina 27611

Re: North Mecklenburg Construction and Demolition Landfill
Permit No. 60-13

Dear Mr. Matthews:

This will confirm our telephone conversation on April 5, 1995 with respect to the above matter. As I mentioned at that time, a permit has been issued for a demolition landfill for a 42.77 acre site owned by North Mecklenburg Construction and Demolition Landfill ("North Mecklenburg"). Subsequent to the issuance of the permit, an adjacent landowner drilled an individual water well in close proximity to the boundary of the site. The question has now been raised as to whether or not the permitted site will be required to maintain a 500-foot buffer between the disposal area and the individual well.

Please find enclosed a copy of Janis D. McHargue's letter to Mr. Larry A. Griffin, President of North Mecklenburg, dated October 7, 1994. I will appreciate your review of this matter and your advice as to what steps we might take to make proper use of the entire 42.77 acre site which has been previously approved. I do not believe the placement of the individual water well after the permit for the tract had been issued should legally bar the use of the property for the permitted purposes.

By copy of this letter to Ms. McHargue, I am asking her to give me a call so we might discuss options available to have this matter resolved at an early date.

Thank you for your cooperation in this matter.

Yours very truly,

H. Parks Helms
H. Parks Helms

HPH:ara
Enc.
cc: Ms. Janis D. McHargue
Mr. Larry A. Griffin

State of North Carolina
Department of Environment,
Health and Natural Resources
Winston-Salem Regional Office

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
Leesha Fuller, Regional Manager



March 7, 1995

Larry A. Griffin
North Mecklenburg Landfill, Inc.
15300 Holbrooks Road
Huntersville, NC 28078

Subject: North Mecklenburg Landfill, Inc.
Amendment to Solid Waste Permit #60-13
Mecklenburg County

Dear Mr. Griffin:

Enclosed please find a solid waste permit and the accompanying conditions for the subject facility, issued in accordance with N.C.G.S. 130A-294 and the NC Solid Waste Management Rules, subject to the Conditions of Permit. This permit is issued for a five year period or until the approved capacity is exhausted.

Please review the conditions of permit carefully and contact me if you have questions about them. Note in particular Construction and Operation Condition No. 3 which establishes the requirements which must be met before the Section can issue approval to operate this landfill. Please contact Jim Bateson at (919) 733-0692 for assistance with Condition 3(d), and Rick Doby at (704) 663-1699 for the site inspection.

If you have questions about this permit or its conditions, please call me at (910) 771-4600.

Sincerely,

A handwritten signature in black ink, reading 'Janis D. McHargue', is written over the typed name.

Janis D. McHargue, P.E.
Western Area Engineer
Solid Waste Section

cc: Jim Coffey
Julian Foscue
Rick Doby
Frank Hicks
Jim Bateson

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director



PERMIT #60-13
AMENDED 7 MARCH 1995

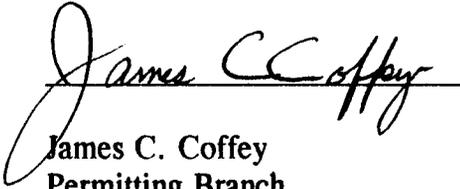
SOLID WASTE PERMIT

NORTH MECKLENBURG LANDFILL, INC.

is hereby issued a permit to construct and operate a

CONSTRUCTION AND DEMOLITION LANDFILL

located on Holbrooks Road southeast of Huntersville in Mecklenburg County, North Carolina in accordance with Article 9, Chapter 130A, of the General Statutes of North Carolina and all rules promulgated thereunder and subject to the conditions set forth in this permit.


James C. Coffey
Permitting Branch
Solid Waste Section

Permit #60-13
Issued 24 June 1993
Amended 7 March 1995

NORTH MECKLENBURG LANDFILL

**SOLID WASTE PERMIT
CONSTRUCTION AND DEMOLITION LANDFILL**

CONDITIONS OF PERMIT

General:

1. This permit shall not be effective unless the certified copy is filed in the Register of Deeds office and indexed in the grantor index under the name of the owner of the land in the county or counties in which the land is located. The certified copy of the permit, affixed with the Register's seal and the date, book, and page number of recording shall be returned to the Division of Solid Waste Management (the Division).
2. When this property is sold, leased, transferred or conveyed, the deed or other instrument of transfer shall contain in the description section in no smaller type than that used in the body of the deed or instrument, a statement that the property has been used as a sanitary landfill.
3. The approved plan for this facility is described in Attachment 1, "List of Documents for Approved Plan". Where discrepancies exist, the most recent submittal and these Conditions shall govern. Some components of the approved plan may be reiterated in these Conditions.
4. This permit is not transferable.
5. A copy of this permit and the approved plan shall be maintained at the facility.
6. The owner/operator is responsible for obtaining any and all permits and approvals necessary for the development of this project including approval from appropriate agencies for a General or Individual NPDES Stormwater Discharge Permit.
7. This permit is subject to review every five years as per 15A NCAC 13B .0201(c), according to the issuance date of the permit. Modifications may be required in accordance with the rules in effect at the time of review.

- Note: Yard trash defined as solid waste consisting solely of vegetative matter resulting from landscaping maintenance (see G.S. 130A-290) is banned from disposal in this facility as per NC General Statutes.
- b. Waste shall be restricted to the smallest area feasible and compacted as densely as practical into cells.
 - c. The permittee shall implement a program for detecting and preventing the disposal of unacceptable wastes. The program shall include, at a minimum:
 - i. Random inspections of incoming loads or other comparable procedures;
 - ii. Recordkeeping which documents these inspections;
 - iii. Training of personnel to recognize hazardous and other unauthorized waste types;
 - iv. Development of a contingency plan to properly manage any identified problem wastes; including provisions for removal, storage, and final disposition of these wastes.

Cover Material Requirements

- a. Waste shall be covered once per week with at least 6 inches of suitable cover, or more frequently if necessary to prevent a public health nuisance.
- b. Areas which will not have additional waste placed on them for 12 months or more, but where final elevations have not been reached, shall be covered with one foot of soil cover.
- c. Within six months of termination of disposal operations the final cover system shall be installed.

Miscellaneous Operational

- a. All pertinent landfill operating personnel shall receive training and supervision necessary to carry out their duties in a safe manner.
- b. Upon closure of this facility, the closure and post-closure plan that is included in the approved plan must be implemented. The soils that are to be utilized for the eighteen inch compacted soil layer must be tested and construction specifications for the placement of this soil be submitted to the Section for approval. All measures necessary shall be taken to close the facility in accordance with all rules in effect at that time.

Monitoring and Reporting

1. Groundwater quality at this facility is subject to the classification and remedial action provisions of 15 NCAC 2L. Water quality monitoring shall occur in accordance with the following specific conditions:
 - a. The permittee shall sample the monitoring wells on a semi-annual basis, or as directed by the Section Hydrogeologist.
 - b. Sampling methods and equipment shall conform to specifications found in Attachment 2, "North Carolina Water Quality Monitoring Guidance Document for Solid Waste Facilities". Sampling parameters shall conform to those found in Attachment 3, "Sampling and Analysis Requirements".
 - c. The permittee shall maintain a record of all monitoring events and analytical data. Reports of the analytical data for each sampling event shall be submitted to the Division in a timely manner.
 - d. Well completion records shall be submitted to the Division within 30 days of installation. (See Construction and Operation Condition 3(d).)
 - e. Prior to the acceptance of waste, a background sampling event shall be performed. The results of this sampling event shall be submitted to the Section Hydrogeologist in a timely manner. (See Construction and Operation Condition 3(d).)
2. Explosive gas monitoring shall be performed according to Section 1 of Document 1 of the approved plan.
3. The permittee shall maintain a record of the amount of waste (in tons) that is received at the facility, compiled on a monthly basis by type and county of origin.
4. On or before 01 August 1995, and each year thereafter, the permittee shall report the amount of waste received at this facility and disposed of in the landfill to the Division and to all counties from which waste was accepted, on forms prescribed by the Division.
5. All pertinent records and reports shall be kept on site and made available to the Division upon request.

ATTACHMENT 1

List of Documents for the Approved Plan

1. Approved Construction and Operation Plan for North Mecklenburg Landfill; submitted by Frank Hicks Associates, Inc. January 20, 1995.
2. Legal Description of the Facility
3. Approved Site and Construction Plans for Phase I of North Mecklenburg Landfill; submitted September 3, 1992

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To PAUL BANKS	From JIM BATESON	
Co. ESI	Co. SOLID WASTE	
Dept.	Phone # 919-333-0692	
Fax # 704 521-8004	Fax #	

FAX MEMORANDUM

To: Paul Banks, ESI

Date: January 20, 1995

From: Jim Bateson, Solid Waste Section

RE: Revisions to N. Mecklenburg C&D Landfill Permit Application;
Response to January 18 Letter to Bobby Lutfy.

I reviewed the revisions to the grading plan and to the monitoring plan outlined in your letter, faxed to our office this morning. The proposed changes seem to match the plan of action that we agreed to during our meeting at the site on January 12th. Jan McHargue will be able to start writing the permit once we have received the revised complete application package from ESI and Frank Hicks. This will need to contain a monitoring plan text with details of sampling frequency and procedures, analytical constituents and protocols, as well as details of monitoring well construction, proposed or actual. I lifted the following paragraph from another document for your reference:

In addition to the basic design requirements of the N.C. Well Construction Standards, 15A NCAC 2C, the Solid Waste Section has certain requirements for the location and design of monitoring wells at landfills. In order to limit dilution of chemical constituents and to limit possible spread of contamination, well screens should not normally exceed 15 feet in length. The sand filter pack should extend no more than one foot below the screen or two feet above the screen. Generally shallow monitoring wells are screened at the water table with a 15 foot screen set so that the top of the screen is just above the seasonal high water table. Where groundwater may reach levels of less than five feet, tops of screens need to be set at five feet in order to accomodate adequate seals to prevent surface water inflow. Deeper wells are generally constructed with ten foot well screens.

Thanks,
Jim Bateson

SUMMARY TABLE OF WELL CONSTRUCTION DETAILS

I.D.	Total Well Depth	Screen Interval	Feb. 10, 94 DTW	May 5, 94 DTW	May 27, 94 DTW
PZ-1	47	37-47	27.28	27.66	27.91
PZ-2	85	65-85	28.78	29.97	30.61
PZ-3	67	47-67	38.21	37.77	38.65
PZ-4	67	47-67	29.14	28.88	28.83
PZ-6	20	10-20			8.3
PZ-7	60	40-60			47.93
MW-2	19	9-19	13.59	12.4	16.8
MW-3	20	10-20	16.96	14.58	17.57
MW-4	67	47-67	28.99	28.95	29.22
MW-5	75	55-75	NG	NG	NG
MW-6	98	78-98	58.59	58.15	50.15
MW-7	83	63-83	51.36	50.93	50.91
MW-8	80	60-80	69.71	69.42	69.45
MW-9	22	12-22	18.73	18.42	18.92
MW-10	19	9-19	11.85	12.2	11.01

NG = Not Gauged

Shaded piezometers are abandoned

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director



January 11, 1995

Mr. Larry A. Griffin
North Mecklenburg Landfill
15300 Holbrooks Road
Huntersville, NC 28078

Subject: North Mecklenburg Construction and Demolition Landfill
Engineering Review of Application to Expand
Permit #60-13

Dear Mr. Griffin:

I am writing to acknowledge receipt of your response to my review letter of November 7, 1994, and to offer further comments intended to assist you in the permitting process. As you were notified in a letter dated today from Bobby Lutfy of the Solid Waste Section, there are still unresolved issues concerning the hydrogeologic aspects of your permit application. Until these issues (primarily the matter of establishing base grades which satisfy vertical separation requirements) are resolved, you should be aware that further revisions to the grading plan, construction plan, cross-sections, and earthwork calculations may be necessary.

We sincerely hope that the planned site visit and discussions will help clarify these issues, and will help us find a course of action which will satisfy all parties involved. For further discussion, please contact me at (910) 771-4600.

Sincerely,

Janis D. McHargue, P.E.
Western Area Engineer
Solid Waste Section

cc: Jim Coffey
Julian Foscue
Frank Hicks

Rick Doby
Central Files ✓
Ron Gilkerson

Jim Bateson
Bobby Lutfy

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Solid Waste Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
William L. Meyer, Director



January 11, 1995

Mr. Paul A. Banks
Ecological Services, Inc.
P.O. Box 12146
Charlotte, N.C. 28220

RE: Hydrogeologic Review Of The North Mecklenburg Construction And
Demolition Landfill (Permit # 60-13)

Dear Mr. Banks,

There are two primary concerns when evaluating hydrogeologic information relating to the design of a C&D landfill facility:

- (1) Solid Waste Management rules and policy require a minimum four foot vertical separation between the bottom elevation of solid waste and the seasonal high water table and/or bedrock; and
- (2) There must be a sufficient understanding of the ground-water flow regime of the uppermost aquifer to design an effective ground-water monitoring system.

There are still some unanswered questions regarding both of these basic concerns.

VERTICAL SEPARATION REQUIREMENTS:

Although there is still limited information on seasonal high water table data, the recent revisions to the grading plan appear sufficient to address the vertical separation requirements from the seasonal high water table.

Since relatively few borings were placed in the proposed landfill footprint, there is only limited information on top of bedrock elevations. Top of bedrock is generally defined as auger refusal or Standard Penetration Resistance (SPR) values of about 50/0.2', since this approximates the limits of excavation using normal grading equipment. Since most of the subsurface investigation at this site was done with air rotary drill rigs, there is very little auger refusal or SPR data available.

There is a problem in meeting the four foot vertical separation from bedrock requirement at boring location SB-3. The boring log for this boring does not have the survey elevations recorded. However it appears on the Grading Plan that boring SB-3 is located at an elevation of approximately 752. Auger refusal was encountered at a depth of about 14 feet, or an elevation of about 738. Therefore in order to maintain the minimum four foot of vertical separation, the base grade must be about 742. The base grade that appears on the Grading Plan at location SB-3 is about 730. Based on the data provided, this means the proposed excavation is about 12 feet deeper than that allowed by the rules.

Regarding the vertical separation from bedrock requirements, North Mecklenburg C&D Landfill has two options: 1) the grading plan can be revised to maintain the vertical separation from bedrock, or 2) further subsurface investigation using an auger drill rig and obtaining SPR values can be done to more clearly identify the top of bedrock surface for the proposed landfill area.

GROUND-WATER MONITORING SYSTEM DESIGN:

In order to design an effective ground-water monitoring system a good understanding of the hydrogeology of the site is necessary. The small map used to illustrate the Phreatic Surface Contours (Figure 7) appears somewhat distorted. The facility boundary measurements do not match those of the larger plan sheets or the boundary survey submitted with the initial permit application. Typically a large scale ground-water contour map is prepared that accurately portrays the ground-water equipotential lines superimposed over ground topography. The map should also show the actual boring locations and piezometer data used to generate the ground-water contours. It would be helpful in evaluating the site if such a ground-water contour map were submitted.

At this time the Solid Waste Section does not have a copy of the initial sampling data and well construction records for the initial phase of landfill development as required by the original permit to operate. We have received sampling data for sampling events performed in January and September, 1994. No well completion records or boring logs have been provided for wells MW-1 and MW-2.

Virtually none of the monitoring wells that have been installed at the site meet the design standards of the Solid Waste Section. In addition to the basic design requirements of the N.C. Well Construction Standards, 15A NCAC 2C, the Solid Waste Section has certain requirements for the location and design of monitoring wells at landfills. In order to limit dilution of chemical constituents and to limit possible spread of contamination, well screens should normally not exceed 15 feet in length. The sand filter pack should extend no more than one foot below the screen or two feet above the screen. Generally shallow monitoring wells are screened at the water table with a 15 foot screen set so that the top of the screen is just above the seasonal high water table. Deeper wells are generally constructed with ten foot well screens.

Ecological Services, Inc. should prepare a summary table of well construction details and stabilized water table data and evaluate the existing wells at the North Mecklenburg Landfill site based upon the above referenced criteria. Also monitoring wells should generally be located at least 50 feet within the permitted facility boundary and about 100 to 150 feet from the waste boundaries.

The proposed monitoring system is not adequate. No background (upgradient) monitoring well has been proposed. Proposed monitoring wells MW-3 and PZ-6 are in the footprint of the waste disposal area. Since this permit application is for a lateral expansion, and the potentiometric map indicates radial ground-water flow at the site, the monitoring system should be designed to effectively monitor all facility boundaries for both Phase I and Phase II of the site.

OTHER ISSUES:

- The phreatic surface shown on the cross-sections differs from the phreatic surface illustrated on the Phreatic Surface Contour Map. Based on the groundwater elevations in Table 5, it appears that the phreatic surface shown on the cross-sections are plotted incorrectly. A flat phreatic surface line as plotted on Cross-section A-A' does not appear realistic given the variable topography.

Ecological Services, Inc.
North Mecklenburg C&D Landfill
Page 4

- Several maps (Figure 4) show two locations for well MW-1. References from the earlier permit application indicate an old well No. 1 that was not recommended for further monitoring. Please clarify the issue of having two monitoring wells designated as MW-1. Provide well records and boring logs for both wells. Which of these wells has been monitored as part of the detection monitoring system for Phase I?

Clarifications are needed for these issues before the technical review can be completed and a permit to construct can be issued. In order to expedite the permitting process, the Solid Waste Section is scheduling an on-site meeting to discuss what needs to be done in order to proceed with landfill development. If you have any questions, please contact the Solid Waste Section at (919) 733-0692.

Sincerely,

Bobby Lutfy

Bobby Lutfy
Hydrogeologist
Solid Waste Section

cc: Jan McHargue, Solid Waste Section, Winston-Salem Reg. Office
Jim Bateson, Solid Waste Section, Raleigh Central Office
Rick Doby, Solid Waste Section, Mooresville Regional Office
Larry Griffin, North Mecklenburg Landfill
Frank Hicks, Consulting Engineer