



North Carolina Department of Environment and Natural Resources

Division of Waste Management

Dexter R. Matthews

Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

January 12, 2011

Mr. Frank Regulski
Bio-Comp, Inc.
2116-B Bio-Comp Drive
Edenton NC 27932

Permit No.	Scan Date	DIN
2102-COMPOST-	August 23, 2012	17105

Re: Solid Waste Compost Permit SWC-21-02

Dear Mr. Regulski:

Enclosed is your permit to operate a Large, Type 2 Solid Waste Compost Facility in Edenton, North Carolina. Please carefully read all permit conditions. The operation manual submitted with your application has been incorporated into your permit. Your permit number is SWC-21-02 with an expiration date of January 12, 2016.

Mr. Ben Barnes, Environmental Senior Specialist, will be responsible for facility inspections and can be contacted at 252-459-4502. If you have any questions please feel free to contact me at 919-508-8508.

Sincerely,

Michael E. Scott, Supervisor
Composting & Land Application Branch

cc: Ben Barnes, Environmental Senior Specialist, DWM
Central File, Solid Waste Section, Division of Waste Management

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
1646 MAIL SERVICE CENTER, RALEIGH, NORTH CAROLINA 27699-1646

Bio-Comp, Inc.

is hereby issued a permit to operate a

LARGE, TYPE 2 SOLID WASTE COMPOST FACILITY

at Bio-Comp Drive, Edenton, NC

Permit Number SWC-21-02

in accordance with Article 9, Chapter 130A, of the General Statutes of North Carolina and all rules promulgated there under and subject to the conditions set forth in this permit.

1/12/11
Date


Michael E. Scott, Branch Head
Solid Waste Section

Permit Conditions:

1. Operation and maintenance of this facility shall be in accordance with the Solid Waste Compost Rules (15A NCAC 13B, Section .1400), the Permit Application and the Operation and Maintenance Manual submitted with the permit application. Failure to comply may result in compliance actions or permit revocation.
2. This facility shall be operated in such a manner that erosion and runoff from the site shall be controlled. Any leachate generated at the facility and any runoff from the facility shall be managed in such a manner that ground or surface water quality will not be adversely affected. The facility shall be maintained to prevent the accumulation of stormwater or leachate on travel areas or active composting sites.
3. An appropriate Division of Water Quality permit for managing any stormwater or wastewater at the facility shall be maintained as required. Additional surface water and groundwater monitoring shall be implemented based on the recommendations from the Compost Operation Stakeholder Advisory Committee (formed under the direction of HB 1100) or as required by the Division of Waste Management.
4. Only materials specifically listed in the permit application may be managed at this facility. Before additional materials may be added, there must be adequate testing and prior approval by the Division of Waste Management in writing.
5. Compost temperatures shall be monitored at a frequency adequate to assure that the temperature requirements of Rule .1406 (11), as appropriate for the feedstock, are met.
6. All compost produced at the facility shall meet the requirements of Rule .1407 of the Solid Waste Compost Rules and the permit application. If the time and temperature requirements for the Process to Further Reduce Pathogens (PFRP) are not met, additional testing can be required to demonstrate that the compost product meets the standards as referenced in .1408 table 3.
7. Testing and reporting shall be conducted in accordance with the requirements of Rule .1408 and the permit application. An annual report of facility activities for the fiscal year July 1 to June 30 shall be submitted to the Division by August 1 of each year on forms provided by the Division. This report shall include the amount of materials received and composted in tons.

8. The compost operation and the compost pad shall be operated and maintained with sufficient dust control measures to minimize airborne emissions and to prevent dust from becoming a nuisance or safety hazard.
9. Compost data shall be maintained as required to document temperatures, moisture levels and aeration intervals. Bulk density and C:N calculations shall be reviewed no less than every 14 days.
10. Dimensions for active composting shall be limited to a maximum of 10-feet high x 22-feet wide unless otherwise approved by the Division.
11. In the event of a mechanical failure, Bio-Comp shall immediately use its best effort to utilize substitute equipment for completion of the composting operation.
12. Windrow turning shall not occur without consulting weather forecasts for favorable conditions including temperature, wind direction, temperature inversions, and precipitation.
13. Upon receipt of an odor complaint, the facility operator shall investigate and take actions as necessary to minimize the cause of the complaint. A copy of all written complaints regarding this facility shall be maintained for the duration of the permit including the operator's actions taken to resolve the complaints.
14. Odorous feedstocks shall not be accepted at the facility unless it is demonstrated that the feedstocks can be effectively composted. Feedstocks shall not be received that are in an anaerobic state.
15. The facility shall be operated in a manner that reduces the potential for vector attraction.
16. Stockpiling of finished product shall be limited to a height of 30'.
17. The facility operational capacity for this permit shall be limited to 80,000 cyd of materials composted per year. This volume limit includes the summation of all feedstocks, amendments and recycled material utilized in the compost process.

Facility: Bio-Comp, Inc.
SWC Permit #: 21-02
County: Chowan

Page 4 of 4

18. This permit shall expire on January 12, 2016. A properly completed application for permit renewal shall be submitted at least 90 days prior to the permit expiration date. Changes in ownership, increase in facility capacity or receiving feedstocks not identified in the permit application shall require a permit modification.

COMPOST PERMIT APPLICATION

BIO-COMP, INC.

November 1, 2010

APPROVED

MES

1/12/11

Date: November 1, 2010

To: Michael Scott, Environmental Supervisor, NCDENR

From: Dr. Frank Regulski, President, Bio-Comp, Inc.

Subject: Permit to operate a solid waste compost facility

.1402 General Provisions

- (a) Site composts pine bark, peanut hulls and cotton gin trash
- (b) Site does not compost any sludge or municipal waste
- (d) Site does import any compost from outside North Carolina
- (e) Compost is not disposed.
- (f) Site is classified as a large type 2 facility receiving more than 1000 cubic yards of silvicultural waste and vegetative agricultural waste which are low in pathogens and physical contaminants and are handled so as to prevent development of contaminants or exposure to physical contaminants. Site occupies about 56 acres of land.

.1403 General Prohibitions

- (a) Site does not receive hazardous waste or asbestos containing waste
- (b) Site does not receive hazardous household waste
- (c) All compost produced is used to manufacture plant growing medium or sold as compost, therefore disposal is not necessary

.1404 Siting/Design Requirements

- (a)
 - (1) Site is not located in a flood plain.
 - (2) The following buffers exist between property lines and composting area: 200 ft on the north, 2,500 ft on the east, 550 ft on the south, 400 ft on the west.
 - (3) A 950 ft buffer exists between compost areas and the occupied trailer to the south.
 - (4) The area is served by county water therefore there are no wells.
 - (5) The nearest perennial stream is located 7 miles away from the site.
 - (6) The classification of the Albemarle Sound in this area is "SB" and there are no apparent restrictions to operating a compost facility in this watershed.
 - (7) Site is not located over a closed-out disposal area.
 - (8) There are no swales or berms that would restrict adequate access of fire fighting equipment.
 - (9)
 - (A) There are no wetlands or waters within a half mile or more from site, materials are confined to the site and there is no discharge of materials or fill materials into waters or wetlands
 - (B) Storm water is directed via ditches to an on-site collection pond designed for use by fire protection unit and does not cause any discharge into waters
 - (C) There is no non-point source pollution of waters for the above reasons.
- (10)
 - (A) The site does not contravene ground water standards.
 - (B) The site is located on a former airport runway; portions of the site used for waste receipt and storage, active composting, and curing are located on a 12-inch thick airport runway pad.
 - (C) Not applicable
 - (D) The finished product is stored on pallets on a 12-inch thick airport runway pad until shipped such that water does not collect around the base of the stored material.
 - (E) The 12-inch thick airport runway pad is not permeable.

(b) No alternate minimum buffers are required

(c)

(1) The site is fenced and gated and does not allow uncontrolled public access

(2) Compost is turned regularly to prevent anaerobic conditions thus minimizing odors.

(3) Compost piles are located toward the interior of the property to minimize odors at the property boundary and there is a buffer of trees at least 200 feet wide around three sides of the property and a buffer at least 500 feet wide on the fourth side; odors are rare and do not travel beyond property boundaries.

.1405 Application Requirements

(b)

(1) Site plan is attached

(2) Letter from Edenton-Chowan Planning and Inspections Department is attached.

(3) Site is located in an industrial park on a former airport runway. There is a buffer of trees at least 200 feet wide around three sides of the property and a buffer at least 500 feet wide on the fourth side. Site is not located in a flood plain. The following buffers exist between property lines and composting area: 200 ft on the north, 2,500 ft on the east, 550 ft on the south, 400 ft on the west. A 950 ft buffer exists between compost areas and the occupied trailer to the south. The area is served by county water therefore there are no wells. The nearest perennial stream is located 7 miles away from the site. Site is not located over a closed-out disposal area. There are no swales or berms that would restrict adequate access of fire fighting equipment. There are no wetlands or waters within a half mile or more from site, materials are confined to the site and there is no discharge of materials into waters or wetlands. Storm water is directed to an on-site collection pond designed for use by fire protection unit and does not cause any discharge into waters. There is no non-point source pollution of waters for the above reasons. The site does not contravene ground water standards. Portions of the site used for waste receipt and storage, active composting, and curing are located on a 12-inch thick airport runway pad. The finished product is stored on pallets on a 12-inch thick airport runway pad until shipped, such that water does not collect around the base of the stored material. The 12-inch thick airport runway pad is not permeable.

(4)

(A) Pine bark, peanut hulls and cotton gin trash are obtained from sources in North Carolina and Virginia. Site currently receives about 20,000 cyd of pine bark, about 40,000 cyd of peanut hulls, and about 5,000 cyd of cotton gin trash per year.

(B) Site is located on a former airport runway which is used as the pad.

(5) Site plan attached

(6)

(A) Frank J. Regulski, President; Bio-Comp, Inc., 2116-B Bio-Comp Drive, Edenton, NC 27932

(B) The facility is designed to manufacture professional growing media for plants

(C) The personnel required to run the facility and their duties are as follows:

a. Loader Operator-Mill: operate wheel loader, receive raw materials, operate hammermill.

b. Loader Operator-Mixer/Production Line: load bins for mixer and packaging line, load bulk trucks.

c. Mixer Operator: produce product and perform quality control.

d. Bagger: operate packaging line.

e. Palletizer: stack product on pallet

f. Forklift Operator: load bins for mixer, receive raw materials, stage finished product for shipment, load trucks.

g. Dispatcher: receive orders from customers, schedule production, arrange trucking for delivery of finished product.

h. Bookkeeper

(D) The schedule of operation is Monday through Friday from 7:30 am to 4:00 pm. Before opening the facilities are unlocked and machinery is started up. After closing, the machinery is shut down and prepared for the next day, and all facilities are locked.

(E) Not applicable

(F) During high wind, heavy rain, snow, freezing or other adverse conditions operations are shut down and personnel are given indoor work to do or are sent home until conditions improve.

(G) Site is located in an industrial park and has a buffer of trees at least 200 feet wide around three sides of the property and a buffer at least 500 feet wide on the fourth side such that noise and airborne particulates do not affect residential areas; employees are supplied with hearing protection and dust masks when needed. Odors are rare because compost piles are turned regularly and are generally confined to the composting area.

(H) Most of the compost is mixed with other components, including peat moss, lime, fertilizer, perlite, and/or vermiculite, to produce professional growing media for plants. Some is sold directly as finished compost. The finished product is shipped on flatbed trucks, dump trucks or pickup trucks. All of the compost produced is sold or used to manufacture finished product so disposal or alternate uses are not necessary.

(7)

(A) Design capacity is 80,000 cyd per year

(B) Flow diagram attached.

(C) Lime is stored in a shed; vermiculite, perlite, and fertilizer are stored on pallets in a shed; peat moss is stored on pallets in the open.

(D) Input materials are measured by 6 cyd bucket loader, processed through a mill and screening system, and mixed and proportioned through a custom mixing system.

(E) Anticipated process duration is nine months.

(F) Not applicable

(G) Each compost pile is monitored for temperature and pH on a weekly basis

(H) Written records show that the compost process is maintained at a temperature of above 104 degrees F for 14 days or longer and the average temperature for that time is higher than 113 degrees F.

(I) A compost turner is used to aerate at necessary intervals.

(J) Not applicable

(K) Storm water runoff is sheet drained to grassed and wooded areas on the site.

(L) Attached

(c)

(1) There are on-site mechanics to fix the equipment when it breaks down (schedule attached). In case of fire there are fire-extinguishers at all locations designated by the fire marshal, and a pond for pumping water if needed by the fire protection agency. The site is located in an industrial park a quarter mile off of the main road with a buffer of trees at least 200 feet wide around three sides of the property and a buffer at least 500 feet wide on the fourth side such that noise, odors and traffic conditions are not problems. In addition, compost turning machine is used to aerate the compost windrows.

(2) Operational requirements outlined in Rule .1406 include the following: Surface water is diverted to drainage pond. Leachate is contained on site. An Operator is on duty at the site at all times that plant is in operation. Access road to site is all-weather construction. Facility accepts only those solid wastes that it is permitted to receive. Fire extinguishers are provided to control accidental fires and arrangements have been made with the local fire department to immediately provide fire-fighting services when needed. All employees are trained in safety, remedial, and corrective procedures.

(3) Temperature, pH, and salt levels of the compost are taken at weekly intervals. Every 10 cyds of final product is tested for pH and salt levels. Every 10 pallets a growing sample is planted with seed and evaluated in the greenhouse. All tests are repeated on a sample for a three day period. A quality control sheet and samples are kept for each production lot and maintained for a year.

(4) Material is processed in the mill, moved by loader into composting area, where it is turned by the compost turner. Loader is used to fill the mixer with components as required by product formulas. The finished product is packaged for shipment on flatbed trucks or loaded onto bulk trucks.

(7) Product is marketed wholesale to distributors in various regions of the country, either drop-shipped directly to their customers or sent to their warehouses.

.1406 Operational Requirements

- (1) The conditions of the permit will be followed and a copy of the permit, plans, and operational reports will be maintained at the site.
- (2) There is a wide buffer of trees and grass around the perimeter of the site that prevents erosion.
- (3) Ditches line the runway to direct stormwater into a drainage pond on the site.
- (4) Leachate is contained as in (3) above.
- (5)
 - (A) Site is fenced and gated to prevent unauthorized entry
 - (B) An operator is on duty at all times that the site is open. The only area open to the public is the office and the compost loading area in front of the office, all other areas of the site are restricted to employees only.
 - (C) The access road is a paved, state-maintained road.
- (6) The only solid waste received are the pine bark, peanut hulls and cotton gin trash purchased and trucked in to the site. The site is not open to the general public for solid waste disposal.
- (7) Safety Requirements
 - (A) The solid waste received at the site is used for compost, not burned.
 - (B) Fire extinguishers are located at various locations that have been designated by the Fire Marshal to control accidental fires. Arrangements have been made with the local fire protection agency to immediately provide fire-fighting services when needed by calling 911. The drainage pond on site is available if needed as a source of water for use by the fire protection agency.
 - (C) Safety training and safety meetings are held regularly, at least once per month, to insure that employees are familiar with safety procedures.
- (8) Sign Requirements
 - (A) There is a sign at the entrance gate stating hours of operation.
 - (B) There is a sign at the main road, and another at the end of the access road directing traffic to the entrance gate.
 - (C) Not applicable. The site is not open to the general public for discharging solid waste.
- (9) Monitoring Requirements
 - (A) The compost piles will be monitored weekly for temperature and pH and written records will be kept for five years. Samples will be sent to NCDA every six months for a Waste Analysis Report.
 - (B) Temperature of the compost will be monitored as in (A) above to ensure that the criteria in (11) below are sufficiently met.
- (10) Not applicable
- (11) Compost process is maintained at a temperature of above 104 degrees F for 14 days or longer and the average temperature for that time is higher than 113 degrees F.
- (12) Not applicable
- (13) Not applicable
- (14) Miscellaneous Requirements
 - (A) The finished compost will meet the classification and distribution requirements of rule .1407 for Grade A compost. It will have no metals present, no man-made inerts present and be pathogen-free.
 - (B) There are no restrictions on distribution of Grade A compost
 - (C) The results of tests outlined in .1407 will be submitted to Solid Waste Section

.1408 Methods for testing and Reporting Requirements

- (a) The compost will be sampled and analyzed as follows
 - (1) A composite sample will be analyzed every six months for test parameters for a Type 2 facility as designated in Table 3 of the Rule.
 - (2) Three individual samples of equal volume will be taken at a depth of two to six feet into the pile from separate areas along the side of the pile. Samples for analysis of metals will be composited and accumulated over a six month period. Samples for analysis of pathogens and nutrients will be

a representative composite sample of the compost and will be processed within a period of time required by the testing procedure

(3) Not applicable.

(4) The Division will determine the parameters to be analyzed

(5) Foreign matter content will be determined from an appropriately composite sample.

(b) Record keeping: Records will be kept for five years and will be available for inspection by Division personnel during normal business hours and sent to the Division upon request.

(1) Operational records showing temperature data and quantity of material processed.

(2) Analytical results of compost testing

(3) Quantity, type and source of waste received

(4) Quantity and type of waste processed into compost

(5) Quantity and type of compost produced

(6) Quantity and type of compost removed for use and market.

(c) Annual Reporting: An annual report for the period July 1 to June 30 will be submitted to the Division by August 1 containing:

(1) Facility name, address, and permit number

(2) Total quantity in tons and type of waste received during the year

(3) Total quantity in tons and type of waste processed into compost during the year

(4) Total quantity in tons and type of compost produced during the year.

(5) Total quantity in tons of compost removed for use with a general description of the market

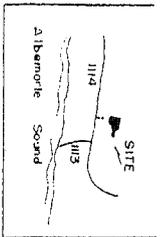
(6) Monthly temperature monitoring to support Rule .1406

(d) Yearly totals of solid waste received and composted will be reported to the local government or annual recycling reporting

- 3.00 ACRES ± R/W'S
6.8 94 ACRES BY COORDINATES

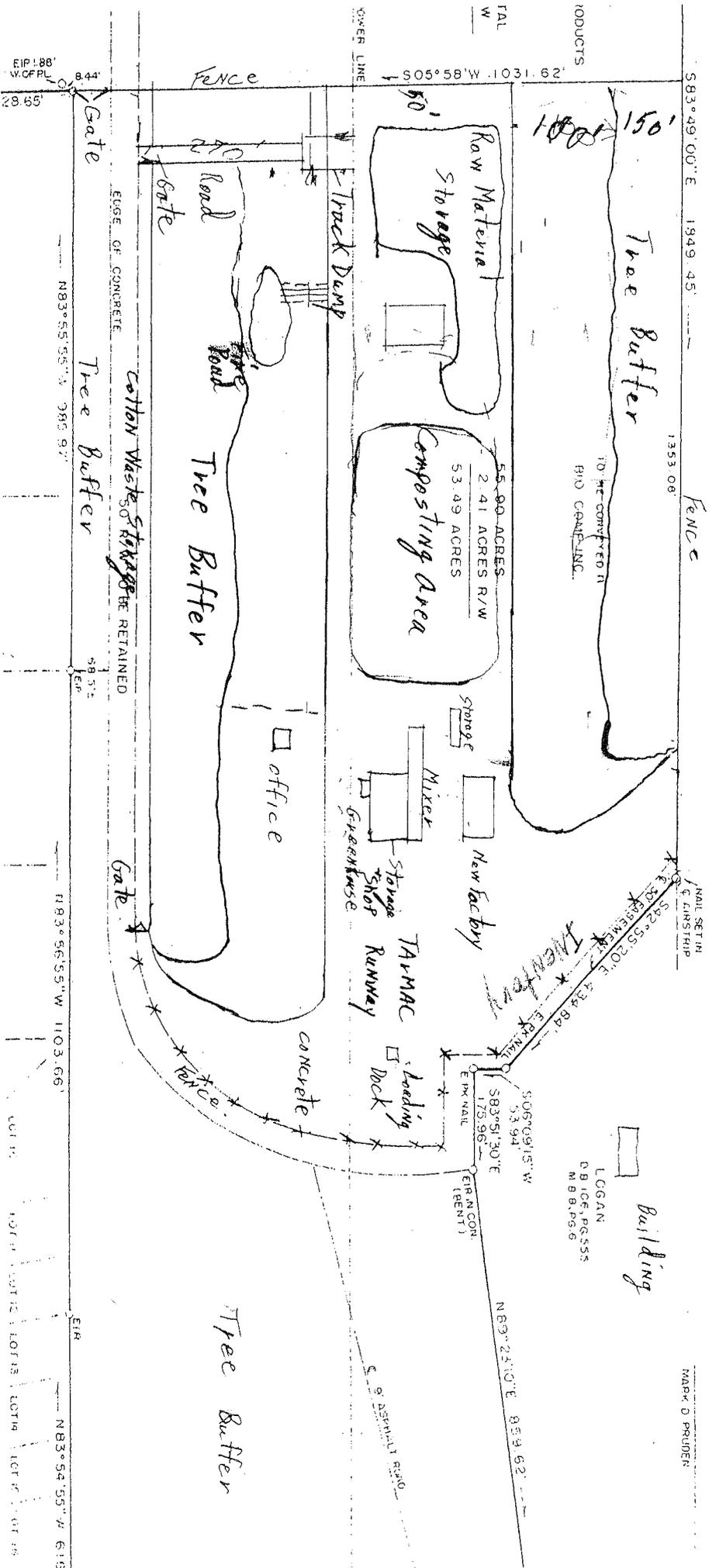
CLF CHAIN LINK FENCE
(C) CONTROL
EIP EXISTING IRON PIPE
EIR EXISTING IRON ROD
E CENTERLINE

EDENTON PROPERTIES
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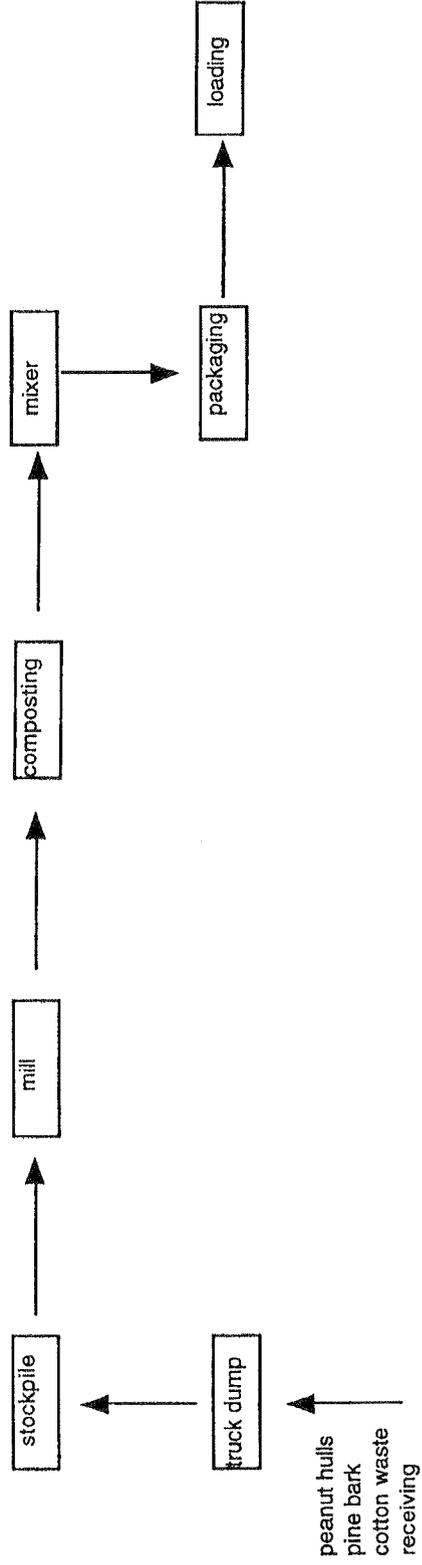


FOURTH TOWNSHIP, CHC
NORTH CAROLI
REFERENCE: DEED 900K 103,
SCALE 1 INCH = 200 FEET, NOV

THIS PLAT IS OF A SURVEY OF AN EXISTING
MARK D. PRUDEN
MARK D. PRUDEN REG. SURVEYOR
EDENTON, N.C.



PROCESS FLOW DIAGRAM



BIO-COMP 50/50 Compost Information

Classification:

Bio-Comp 50/50 Compost is classified as Grade A Compost made from pine bark and peanut hulls according to the requirements of the NC Department of Natural Resources.

Recommended Uses:

Bio-Comp 50/50 Compost may be used to improve the soil in lawns, landscape beds, and for planting trees and shrubs.

Application Rates:

Bio-Comp 50/50 Compost may be spread over lawn or landscape bed areas to a depth of about two inches and rototilled to a depth of about four inches. When planting trees or shrubs, Bio-Comp 50/50 Compost may be mixed with an equal part of soil and used to backfill around the roots of the plant.

Restrictions on Usage:

There are no restrictions on the use of Bio-Comp 50/50 Compost.

Manufactured exclusively by:



BIO-COMP, INC.

**"Bio-Composted,
A Natural Choice"**

2116-B BIO-COMP DRIVE • EDENTON, NC 27932 • (800) 624-GROW • (252) 482-8528 • Fax (252) 482-3491



EDENTON-CHOWAN
PLANNING AND INSPECTIONS DEPARTMENT

P.O. Box 1030, Edenton, NC 27932
108 East King Street, Edenton, NC 27932
Phone 252-482-5618 FAX 252-482-5920



September 6, 2001

Mr. Frank Regulski
Bio-Comp
2116 Bio-Comp Drive
Edenton, NC 27932

Mr. Regulski:

The property at the above address is zoned Industrial. This type of business is permitted in this zoning district.

The setbacks for any new building from the property lines on this property are as follows:

25' from the front
10' from the sides & rear

If you have any more questions, please feel free to call me at the Edenton-Chowan Planning & Inspections office at 482-5618.

Sincerely,

Kent Pierce
Building Inspector

Grower: BioComp Inc.
2116-B BioComp Dr.
Edenton, NC 27932

Copies To:



Waste Analysis Report

Farm:

Chowan County

9/13/01

Sample Info: Laboratory Results (parts per million unless otherwise noted)

Sample ID:	Laboratory Results (parts per million unless otherwise noted)												
	N	P	K	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl
Total	9190	422	2470	3895	877	662	520	43.6	41.9	11.8	11.0		
	IN-N												
Waste Code:	-NH4												
	-NO3												
Description:	OR-N												
	Urea												
Recommendations:	Nutrients Available for First Crop												
pHcation Method	N	P2O5	K2O	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl
	2.9	0.45	1.9	1.8	0.41	0.31	0.24	0.02	0.02	0.01	0.01		
Soil Incorp	3.6	0.56	2.1	2.3	0.51	0.39	0.30	0.03	0.02	0.01	0.01		
C:N ratio	3. C:N ratio is very high. The waste product will be very slow to decompose. To speed mineralization or composting, blend with a material containing a very low C:N ratio to obtain an ideal ratio of 20-30.												
	uble salt level is low. The compost can be used as a landscape soil or potting media without blending other materials to lower soluble salts. Additional fertilizer may be needed to supply required nutrients. Take a leaching soil sample of the compost to further evaluate nutrient availability and pH.												
ripest pH is below the ideal range for plant production. If the material will be used as a landscape or potting soil, blend other materials or add agricultural lime to increase pH to the desired range. Submit a leaching soil sample for guidance on lime rate.													

Sample Info: Laboratory Results (parts per million unless otherwise noted)

Sample ID:	Laboratory Results (parts per million unless otherwise noted)												
	Total	P	K	Ca	Mg	S	Fe	Mn	Zn	Cu <th>B</th> <th>Mo</th> <th>Cl</th>	B	Mo	Cl
Total	25329	3607	9364	18706	4072	2666	1698	93.9	48.5	13.1	38.1		
	IN-N												
Waste Code:	-NH4												
	-NO3												
Description:	OR-N												
	Urea												
Recommendations:	Nutrients Available for First Crop												
Application Method	N	P2O5	K2O	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl
	14.2	6.9	12.6	15.7	3.4	2.2	1.4	0.08	0.04	0.01	0.03		
Soil Incorp	17.7	8.7	14.2	19.6	4.3	2.8	1.8	0.10	0.05	0.01	0.04		
C:N ratio	rogen is very high in relation to carbon (Low C:N Ratio). If the waste product is to be used as a raw material in composting, blend it with another material with a high C:N ratio. The C:N ratio should be 20-30 for 2nd composting conditions.												
	uble salt level is very high. The compost cannot be used as a landscape soil or potting media without blending other materials to lower soluble salts to an acceptable level. Very high soluble salts likely indicate very 2nd nutrient availability. Take a matching soil sample to further evaluate pH and nutrient availability.												

Sample Info: Laboratory Results (parts per million unless otherwise noted)

Sample ID:	Laboratory Results (parts per million unless otherwise noted)												
	Total	P	K	Ca	Mg	S	Fe	Mn	Zn	Cu <th>B</th> <th>Mo</th> <th>Cl</th>	B	Mo	Cl
Total	25329	3607	9364	18706	4072	2666	1698	93.9	48.5	13.1	38.1		
	IN-N												
Waste Code:	-NH4												
	-NO3												
Description:	OR-N												
	Urea												
Recommendations:	Nutrients Available for First Crop												
Application Method	N	P2O5	K2O	Ca	Mg	S	Fe	Mn	Zn	Cu	B	Mo	Cl
	14.2	6.9	12.6	15.7	3.4	2.2	1.4	0.08	0.04	0.01	0.03		
Soil Incorp	17.7	8.7	14.2	19.6	4.3	2.8	1.8	0.10	0.05	0.01	0.04		
C:N ratio	rogen is very high in relation to carbon (Low C:N Ratio). If the waste product is to be used as a raw material in composting, blend it with another material with a high C:N ratio. The C:N ratio should be 20-30 for 2nd composting conditions.												
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North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director

Division of Waste Management

Michael F. Easley, Governor

William G. Ross Jr., Secretary

March 14, 2007

Dr. Frank J. Regulski, President
Bio-Comp, Inc.
2116-B Bio-Comp Drive
Edenton, North Carolina 27932

Dear Dr. Regulski:

The Division of Waste Management, Solid Waste Section, has received the application information you submitted requesting to renew the permit for the Bio-Comp, Inc Compost Facility, Permit #21-02. The information you submitted is not adequate to renew the permit for Bio-Comp. The following additional issues will need to be adequately addressed prior to our completing the review of your application.

1. We have no documentation that your alternative plan for meeting pathogen reduction requirements was ever followed. If this requirement cannot be met, you will need to provide documentation that you are maintaining temperatures above 131 degrees for the required period of time and turnings.
2. We have no documentation that testing for pathogens, metals, or man-made inert materials was conducted every 6 months or 20,000 tons as required in the Solid Waste Compost Rules and as specified in your original permit application.
3. The schedule you refer to in part one of your operation information was not attached.
4. Operation information does not address temperature monitoring frequency per windrow or sterile techniques to be used when sampling for pathogens.
5. The site plan submitted does not meet the one inch equals 100 feet requirement in the Solid Waste Compost Rules. Please be sure that your site plan is consistent with what is actually located on the grounds at the facility.
6. In order for us to repermit your facility we will need written documentation, a permit or a letter saying you do not need a permit, from the N.C. Division of Water Quality that the method you are using to manage runoff from this facility meets their requirements.
7. Any structures or processes required by the Division of Water Quality should be noted on the site plan and in the operation manual.

Please note that these matters should be handled as promptly as possible since your permit has expired. If you have any questions, please feel free to contact me at 919-508-8508.

Sincerely,

A handwritten signature in cursive script that reads "Ted Lyon".

Ted Lyon, Supervisor
Composting & Land Application Branch

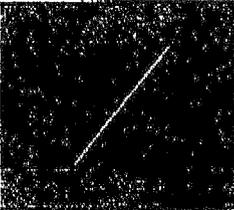
cc: Chuck Boyette, Waste Management Specialist, Washington Regional Office

h.cla/compost/permits/21-chowan/Bio-Comp/SWC-21-02-apprev_03-07

Q-482-349/
 AM - Frank
 Bio-Comp

ZONE C

KEY TO MAP

500-Year Flood Boundary	-----	
100-Year Flood Boundary	-----	
Zone Designations*		
100-Year Flood Boundary	-----	
500-Year Flood Boundary	-----	
Base Flood Elevation Line With Elevation In Feet**	-----513-----	
Base Flood Elevation in Feet Where Uniform Within Zone**		(EL 987)
Elevation Reference Mark		RM7x
Zone D Boundary	-----	
River Mile		*M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
<u>C</u>	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (Zones A and V) may be protected by flood control structures.

This map is for flood insurance and flood plain management purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

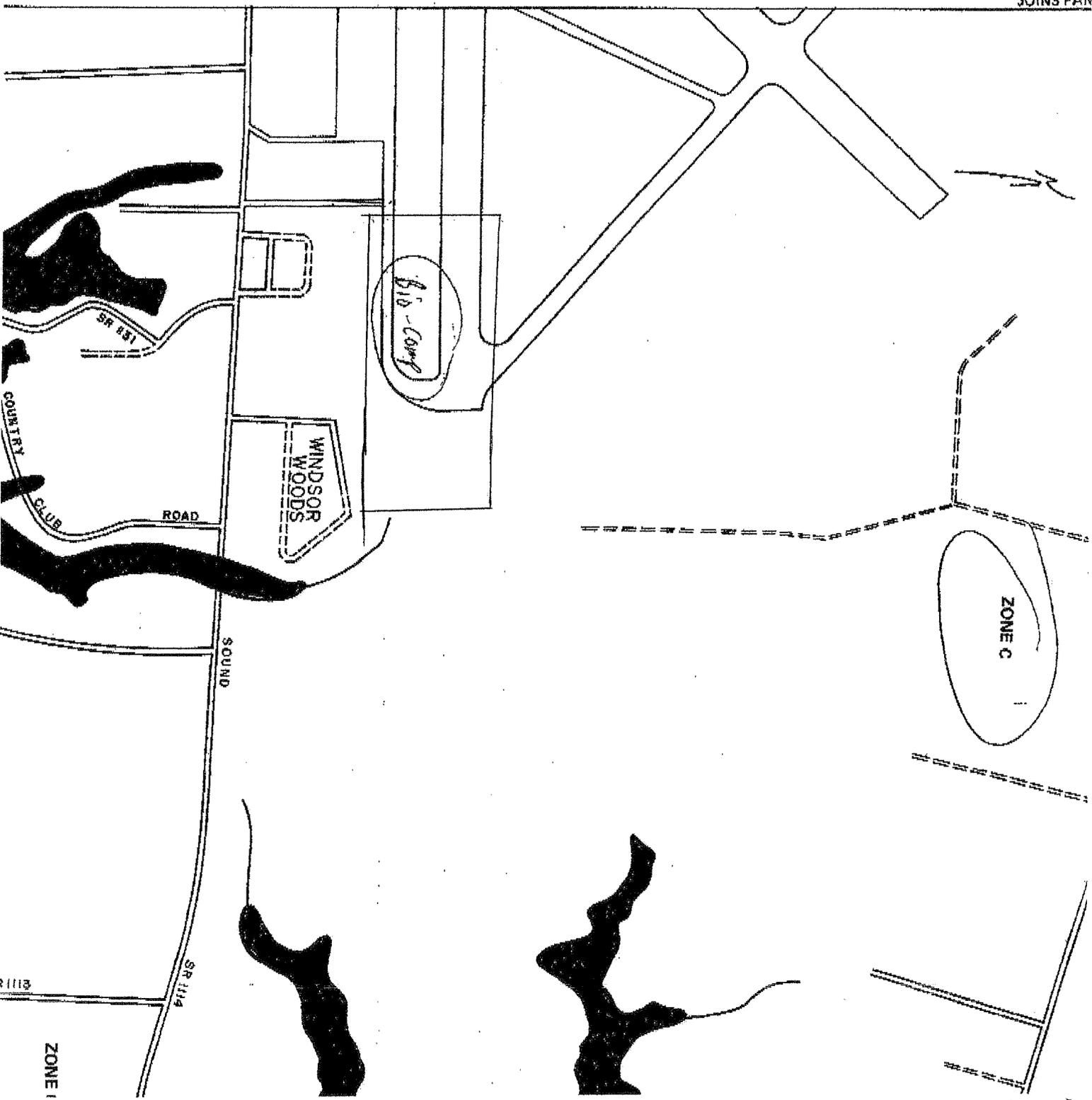
The coastal flooding elevations shown may include the effects of wave action and may differ significantly from those developed by the National Weather Service for hurricane evacuation planning. Coastal base flood elevations apply only landward of the shoreline shown on this map.

For adjoining map panels, see separately printed Map Index.

INITIAL IDENTIFICATION:

100yds
flood
ZONE

1/2 1000'



21113

ZONE 1



Microbac Laboratories, Inc.

SOUTHERN TESTING & RESEARCH DIVISION
3809 AIRPORT DRIVE, NW
WILSON, NC 27896-8649
(252) 237-4175 (252) 237-9341 (fax)
www.southerntesting.com

REPORT of ANALYSIS

SAMPLE No.: R4066-001 / AB24687
Date Reported: Friday, June 22, 2007

DR.FRANK REGULSKI
BIO COMP
2116-B BIO COMP DR
EDENTON NC 27932

Phone / Fax: 252-482-8528/252-482-3491
P. O.:

Client Sample Marks: SPRING 07

Sample Collection Date:	6/4/2007	12:00:00 AM	Matrix:	PINE BARK PEA
Lab Submittal Date:	6/5/2007	10:30:00 AM	Classification:	E

CAT No.	ANALYSES	METHOD	ANALYZED	by	PQL	RESULT	UNIT
EM-028-S	Nickel (ICP)	SW846 6010B	6/17/2007	PCC	1.2	<1.2*	mg/kg
EM-029-S	Copper (ICP)	SW846 6010B	6/17/2007	PCC	0.50	11.8*	mg/kg
EM-030-S	Zinc (ICP)	SW846 6010B	6/17/2007	PCC	0.50	24.8*	mg/kg
EM-048-S	Cadmium (ICP)	SW846 6010B	6/17/2007	PCC	0.50	<0.50*	mg/kg
EM-082-S	Lead (ICP)	SW846 6010B	6/17/2007	PCC	2.5	<2.5*	mg/kg
EP-002	Digestion (ICP/FAAS)	EPA 3050B	6/11/2007	DJS		Yes	
EW-040-02-0	Foreign Matter Content	EPA 160.3/503	6/6/2007	JWP	0.03	<0.03	%
EW-040-05	Moisture	OVEN DRY	6/6/2007	PEB	0.01	59.4	%

Sample Comments:

*Metals results reported on a dry-weight basis.

Reviewed and Approved by:

Shelia Hinnant
Manager, Analytical Sciences Department



Microbac Laboratories, Inc.

SOUTHERN TESTING & RESEARCH DIVISION
3809 AIRPORT DRIVE, NW
WILSON, NC 27896-8649
(252) 237-4175 (252) 237-9341 (fax)
www.southerntesting.com

REPORT of ANALYSIS

SAMPLE No.: R5838-001 / AB32252
Date Reported: Thursday, August 16, 2007

FRANK REGULSKI
BIO COMP
2116-B BIO COMP DR
EDENTON NC 27932

Phone / Fax: 252-482-8528/252-482-3491
P. O.:

Client Sample Marks: SPRING 07

Sample Collection Date: 7/31/2007 12:00:00 AM Matrix: SOLID
Lab Submittal Date: 7/31/2007 11:00:00 AM Classification: E

CAT No.	ANALYSES	METHOD	ANALYZED	by	PQL	RESULT	UNIT
EB-007-01	Fecal Coliform (MPN) sw	SM 9221E	7/31/2007	JBD	1	<1	MPN/g
EW-040-12-G	SOLIDS: TOTAL (%)	EPA 160.3	8/3/2007	AJF	0.004	31	%

Sample Comments:

Reviewed and Approved by:

Sheita Hinnant
Manager, Analytical Sciences Department



BIO-COMP, INC.

**"Bio-Composted,
A Natural Choice"**

2116-B BIO-COMP DRIVE, EDENTON, NC 27932 - (252) 482-8528 - FAX (252) 482-3491

September 11, 2007

Michael Scott, Supervisor
Solid Waste Section
Division of Waste Management
NCDENR
401 Oberlin Road, Suite 160
1646 Mail Service Center
Raleigh, NC 27699-1646

Re: Permit #SWC-21-02

Dear Mr. Scott:

This letter addresses each of the seven issues raised in Ted Lyon's letter of March 14, 2007.

1. Bio-Comp, Inc. is defined by NCDENR as a Large, Type 2 Facility and as such, according to Rule .1406 (11) of the North Carolina Solid Waste Compost Rules, is required to maintain compost at a temperature of 104 degrees F for 14 days with an average temperature of 113 degrees F for that time, not 131 degrees F as stated in Mr. Lyon's letter. Enclosed is a typical compost temperature record. The complete record is posted in the office where it is readily available to Waste Management Specialist, Chuck Boyette, during his inspections.
2. Enclosed are test results for pathogens, metals or man-made inert materials.
3. Enclosed is the maintenance schedule.
4. Temperature is monitored at weekly intervals. Sterile technique using procedures and sterile vessels provided by Microbac Laboratories, Inc. are followed when sampling for pathogens.
5. Enclosed is a revised site plan.
6. Enclosed is a written response from Sergei Chernikov, Ph.D., Environmental Engineer with the Division of Water Quality, stating that a Permit is not required.
7. Not applicable.

Sincerely,

Frank J. Regulski, Ph.D.
President

Enclosures

		MON	TUE	WED	THU	FRI
1						
2						
3	CLEAN MAGNETS & SCREENS AT HAMMERMILL					
4	DRAIN TANK ON AIR COMPRESSOR					
5	CHECK WRAP SETTINGS ON STRETCH WRAPPER					
6						
7						
8						
9		MON	TUE	WED	THU	FRI
10	GREASE BEARINGS ON BLUE GRINDER					
11	CLEAN MAGNETS & SCREENS AT HAMMERMILL					
12	DRAIN TANK ON AIR COMPRESSOR					
13	CHECK WRAP SETTINGS ON STRETCH WRAPPER					
14						
15						
16						
17		MON	TUE	WED	THU	FRI
18	GREASE BEARINGS ON BLUE GRINDER					
19	CLEAN MAGNETS & SCREENS AT HAMMERMILL					
20	DRAIN TANK ON AIR COMPRESSOR					
21	CHECK WRAP SETTINGS ON STRETCH WRAPPER					
22						
23						
24						
25		MON	TUE	WED	THU	FRI
26	GREASE BEARINGS ON BLUE GRINDER					
27	CLEAN MAGNETS & SCREENS AT HAMMERMILL					
28	DRAIN TANK ON AIR COMPRESSOR					
29	CHECK WRAP SETTINGS ON STRETCH WRAPPER					
30						
31						
32						
33		MON	TUE	WED	THU	FRI
34	GREASE BEARINGS ON BLUE GRINDER					
35	CLEAN MAGNETS & SCREENS AT HAMMERMILL					
36	DRAIN TANK ON AIR COMPRESSOR					
37	CHECK WRAP SETTINGS ON STRETCH WRAPPER					
38						
39						

DAILY MAINTENANCE SCHEDULE

		1ST WEEK	2ND WEEK	3RD WEEK	4TH WEEK
1					
2	CHECK HAMMERS/CHANGE ROTATION AT HAMMERMILL				
3	CHECK CONV. BELT ALIGNMENT AT HAMMERMILL				
4	CHECK CHAIN FLIGHTS AT HAMMERMILL <i>to production</i>				
5	CHECK CONV. BELT ALIGNMENT AT BLUE GRINDER				
6	GREASE PINS/CHECK LIFT BELT & CHAINS AT TRK DUMP				
7	CHECK BELT ALIGNMENT ON BULK BAGGER				
8	CHECK BELT ALIGNMENT ON BAGGER				
9	CHECK V-BELTS & BANDS ON SEALERS				
10	CHECK PINS & CHAINS ON PALLETIZERS				
11	CHECK AIR PRESSURE ON PALLETIZERS				
12	CHECK CABLE & SPOOL ON STRETCH WRAPPER				
13	CHECK BELT ALIGNMENT ON MIXER SYSTEM				
14	CHECK DRIVE BELTS & CHAIN SYSTEMS ON MIXER				
15	<i>Put nose shredder back grease</i>				
16	<i>mixer screens.</i>				
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					

WEEKLY MAINTENANCE SCHEDULE

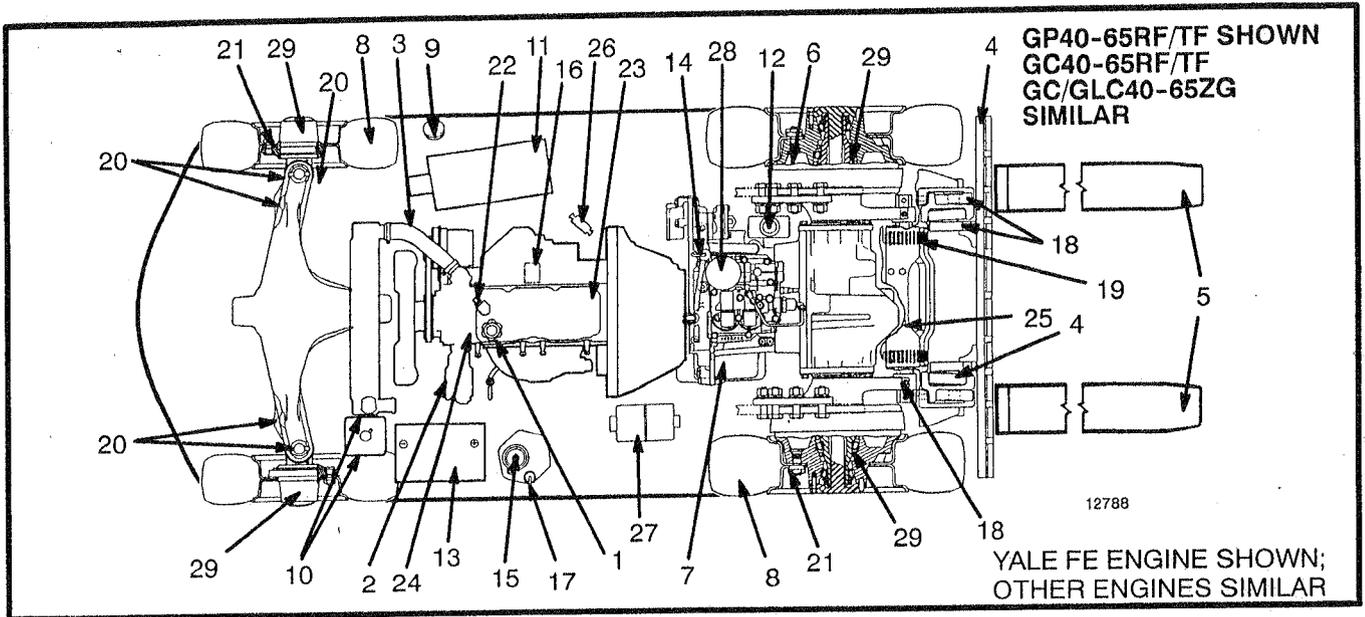


Figure 2-2. Maintenance And Lubrication Points

Legend for Figure 2-2.

- | | |
|--|--|
| <ul style="list-style-type: none"> 1. ENGINE OIL 2. DRIVE BELTS 3. COOLANT HOSES 4. MAST, CARRIAGE, LIFT CHAINS 5. FORKS 6. BRAKES 7. TRANSMISSION 8. TIRES 9. GASOLINE OR DIESEL FUEL 10. COOLING SYSTEM 11. ENGINE AIR FILTER 12. BRAKE FLUID 13. BATTERY 14. TRANSMISSION OIL | <ul style="list-style-type: none"> 15. HYDRAULIC OIL 16. ENGINE OIL FILTER 17. HYDRAULIC TANK BREATHER 18. MAST SLIDING SURFACES 19. LIFT CHAINS 20. STEERING AXLE 21. WHEEL NUTS 22. PCV VALVE 23. VALVE ADJUSTMENT 24. SPARK PLUGS 25. DIFFERENTIAL OIL 26. GASOLINE OR LPG FUEL FILTER 27. HYDRAULIC OIL FILTER 28. TRANSMISSION OIL FILTER 29. WHEEL BEARINGS |
|--|--|

MAINTENANCE SCHEDULE

LEGEND

- A — Every 8 Hours or Daily
- B — Every 250 Hours or 6 Wks
- C — Every 500 Hours or 3 Mo
- D — Every 1000 Hours or 6 Mo
- E — Every 2000 Hours or 1 Yr

- X — Indicates Visual Inspection, Test and Adjust as required
- CIL — Check Indicator Light during operation
- O — Indicates Drain and Fill
- R — Indicates Replacement
- IR — Initial Replacement
- CO — Complete Overhaul

SAFETY AND OPERATIONAL CHECKS (Before each shift) Only the 8-hour CHECKS are to be done by the operator. Have a qualified service person correct all problems.	A	B	C	D	E
Fuel Odor Present?	Do not start truck! Report to your supervisor immediately.				
Leaks: Fuel, Hydraulic Oil, Transmission, Engine Oil or Engine Coolant	X				
Tires — Condition and Pressure. (See NOTE 1)	X				
Forks, Top Clip Retaining Pin and Heel (Condition)	X				
Load Backrest Extension — Attached, Cracks, Mounting	X	X			
Hydraulic Hoses, Mast Chains and Stops — Check Visually	X				
Overhead Guard — Attached, Cracks, Mounting	X				

DAILY
MONTHLY

SAFETY AND OPERATIONAL CHECKS (CONT'D)	A	B	C	D	E
Propane Tank (LP Gas Trucks) — Rust, Corrosion, Damage	X				
Drain Tar From Aisan LPG Regulator			X		
Regulator Pressure/Diaphragm and O-Ring (Aisan)				X	C
Solenoid Valve (Asian)					X
Fuel Filter (Asian)					C
Low Emission System (Mazda LPG Closed-Loop)	CIL				
Safety Labels — Attached and can be read (See Parts Manual For Location)	X				
Engine Compartment:					
Battery — Water/Electrolyte Level (See NOTE 3)		X			
Hydraulic Tank Fluid Level (Dipstick) (See NOTE 3)		X			O
Transmission Fluid Level (Dipstick)		X			O
Engine Oil Level (Dipstick)	X	O			
Engine Oil Filter (See NOTE 5) (Change engine oil and filter every 300 hours)		R			
All Engine Belts (See NOTE 4)	X	R			
Engine Air Cleaner—(Empty Rubber Dirt Trap) (See NOTE 2)	X				
Fuel Filter, Diesel	CIL				R
Radiator Coolant Level And Hoses (Auxiliary Coolant Reservoir)	CIL X				O
PCV Valve				X	R
Engine Timing Belt		X			R
Engine Idle and Governed Speeds		X			
Engine Timing				X	
Engine Valves — Adjust				X	
Spark Plugs				R	
Fuel Injectors (Gasoline)					X
Fuel Injector (Mazda LPG Closed Loop)					X
Operator's Compartment: Operating Instructions Manual In Case					
Nameplate Attached — Information matches model, serial number and attachments	X				
Hood Latch And Seat Latches	X				
Accelerator Linkage — Operates Smoothly	X				
Brake Fluid — Check Level	CIL	X			
Controls (Start Lift Truck) — Immediately Check Noises That Are Not Normal					
Parking Brake -- Operates Correctly	X				
Service Brake — Operates Smoothly and Correctly	X				
Steering Operation — Operates Smoothly and Correctly	X				
Direction Control — Forward/Reverse — Operates Correctly	X				
Lift and Lowering Control — Operates Smoothly and Correctly	X				
Tilt Control — Operates Smoothly and Correctly Forward and Backward	X				
Attachment Controls — Operate Smoothly and Correctly	X				
Horn — Operates Correctly	X				
Lights — Operate Correctly	X				
Cab (If Equipped): Heater, Defroster, Wipers — Operate Correctly	X				

DAILY
MONTHLY
QUARTERLY
6 MONTHS
YEARLY

GENERAL LIFT TRUCK MAINTENANCE
AND LUBRICATION SCHEDULE



DRIVE TRAIN	A	B	C	D	E
Wheel Nuts —					
Older GC/GLC 040-065 TF/RF Models		X			
Initial Torque 200 Nm (150 lbf ft)		X			
Final Torque 34 Nm (25 lbf ft)					
Newer GC/GLC 040-065 TF/RF Models		X			
Initial Torque 68 Nm (50 lbf ft)		X			
Final Torque 3 Nm (27 lbf in)					
GP40-65RF/TF Models		X			
237 to 305 Nm (175 to 225 lbf ft)					
Brake Drums and Linings				X	
Transmission — Operation, Oil Level	X	X			O
Transmission Oil Filter (See NOTE 5)					R
Differential				X	O
ELECTRICAL SYSTEM					
Battery Condition — Structure and Electrical		X			
All Wire Connections		X			
ROAD TEST AND LOAD TEST THE LIFT TRUCK — Do these tests daily and after every maintenance inspection or repair. Do the tests using a capacity load in the correct position on the forks and a clear area. Drive carefully and observe all traffic regulations and operating procedures. Report all functions or noises that are not normal.					
Steering	X				
Brakes — Service, Parking, Seat (if equipped)	X				
Horn, Lights	X				
Traction System — Acceleration, Creep	X				
Mast — Check for the correct operation and that all stops are installed. Do the checks with and without a load:					
Lifting — Full Lift (Do Not Tilt Forward) and Lower.	X				
Tilt — With load lowered, tilt fully Forward and Backward.	X				
Attachment — Operate all functions.	X				

DAILY
MONTHLY
QUARTERLY
6 MONTHS
YEARLY

Wheel Loaders 180 +120 Maintenance

MAINTENANCE

SERVICE ITEM	PAGE
CHECKS BEFORE STARTING (continued)	
Check effect of parking brake	2-30
Check effect of wheel brakes	2-31
Check sound of horn and backup alarm	2-31
Check flashing of lamps, check for dirt or damage	2-31
Check engine exhaust color and sound	2-31
Check operation of gauges	2-31
Check play of steering wheel, check operation of steering	2-31
Check direction of rear view mirror, check for dirt or damage	2-31
Check lock of cab door (machine equipped with cab)	2-31
** WEEKLY ** EVERY 50 HOURS SERVICE ** WEEKLY **	
Check tire inflation pressure	3-43
Drain water, sediment from fuel tank	3-43
Check engine air intake system	3-43
** TWO WEEKS ** EVERY 100 HOURS SERVICE ** TWO WEEKS **	
Check oil level in hydraulic tank, add oil	3-44
Clean element in air conditioner fresh air filter	3-45
Lubricate the following:	3-46
• Bucket pin (2 places)	3-46
• Bucket link pin (2 places)	3-46
• Rear axle pivot pin (2 places)	3-46
** MONTHLY ** EVERY 250 HOURS SERVICE ** MONTHLY **	
Change oil in engine oil pan, replace engine oil filter	3-47
Check for loose wheel bolts, tighten	3-48
Clean element in air conditioner recirculation filter	3-48
Check air conditioner compressor belt tension, adjust	3-49
Check battery electrolyte level	3-50
Check air intake system	3-50
Lubricate the following:	3-51
• Bucket cylinder pin (2-places)	3-51

MAINTENANCE

23. MAINTENANCE SCHEDULE CHART

23.1 MAINTENANCE SCHEDULE CHART

SERVICE ITEM	PAGE
INITIAL 250 HOURS SERVICE (only after the first 250 hours)	
Replace fuel filters	3-30
Replace transmission oil filter element	3-30
Replace hydraulic tank filter element	3-30
WHEN REQUIRED	
Check, clean or replace air cleaner element	3-31
Check transmission oil level, add oil	3-33
Check axle oil level, add oil	3-34
Clean axle case breather	3-35
Clean radiator fins	3-35
Replace bolt-on cutting edge	3-36
Replace bucket teeth	3-37
Check air conditioner	3-38
Clean the air conditioner condenser (if equipped)	3-39
Check window washer fluid level, add fluid	3-39
Adjust parking brake	3-40
Replace slow blow fuse	3-41
Check air intake heater	3-41
CHECK BEFORE STARTING	
Check coolant level, add coolant	2-27
Check fuel level, add fuel	2-27
Check oil level in engine oil pan, add oil	2-28
Check and refill oil in brake oil tank	2-28
Check dust indicator	2-29
Check electric wiring	2-29
Drain water from the fuel water separator	2-30
Drain the water from the fuel-water separator	2-30

MAINTENANCE

SERVICE ITEM	PAGE
*** MONTHLY *** EVERY 250 HOURS SERVICE (continued) *** MONTHLY ***	
● Boom cylinder pin (4 places)	3-51
● Boom pivot pin (2 places)	3-51
● Tilt lever pin (1 place)	3-51
● Steering cylinder pin (4 places)	3-51
** QUARTERLY ** EVERY 500 HOURS SERVICE ** JAN/MAR/JUL/OCT **	
Replace fuel filters	3-52
Replace transmission oil filter element	3-54
Lubricate the following:	3-55
● Center hinge pin (2 places)	3-55
** 6 MONTH ** EVERY 1000 HOURS SERVICE ** 6 MONTH **	
Change oil in transmission case, clean strainer	3-56
Clean transmission case breather	3-57
Lubricate the following:	3-58
● Front drive shaft (1 place)	3-58
● Drive shaft center support (1 place)	3-58
● Center drive shaft (2 places)	3-58
● Rear drive shaft (2 places)	3-58
Change oil in hydraulic tank, replace hydraulic filter element	3-59
Adjust engine valve lash clearance (After first 1000 hours only thereafter every 2000 hour intervals)	3-60
Check fan belt tension	3-61
Check fan belt tensioner bearing and fan hub bearing, and inspect fan belt	3-61
Check tightening parts of turbocharger	3-62
Check play of turbocharger rotor	3-62

PERIODIC MAINTENANCE AND LUBRICATION SCHEDULE

Before delivery of your new Forklift, your Dealer provides a pre-delivery inspection and adjustment service specified by the factory and designed to ensure satisfactory performance.

The following tables list the servicing required to keep your Forklift operating at peak mechanical condition, and should be attended to as indicated, preferably by an authorized NISSAN dealer.

MAINTENANCE OPERATION	Months Hundreds of hours	MAINTENANCE INTERVAL											
		1	2	3	4	5	6	7	8	9	10	11	12
		2	4	6	8	10	12	14	16	18	20	22	24
ENGINE COMPARTMENT MAINTENANCE													
1. Intake & exhaust valve clearances		A		A				A		A			A
2. Drive belt tension		T											
3. Cylinder head bolts & manifold nuts	(1)			C				C		C			C
4. Radiator outside	(1)	R	R	R	R	R	R	R	R	R	R	R	R
5. Engine oil	(1)	R		R				R					R
6. Oil filter													R
7. Engine coolant (L.L.C.)	(1)	C		C				C		C			R
8. Fuel strainer element (H20-II, H26)	(1)	I		I				I		I			R
Fuel strainer (A15)		D		D				D		D			R
Water separator (SD25)	(1)	C	C	C	C	C	R	C	C	C	C	C	R
9. Air cleaner element		A	A	A	A	A	A	A	A	A	A	A	A
10. Engine idle rpm		A	A	A	A	A	A	A	A	A	A	A	A
11. Ignition timing (Gasoline)		I	I	I	I	I	I	I	I	I	I	I	I
12. Spark plugs (Gasoline)	(2)												
13. Nozzles (Diesel)		I	I	I	I	I	I	I	I	I	I	I	I
14. Distributor point, cap & rotor (Gasoline)	(1)												I
Distributor inside (IC Ignition system)	(1)												I
15. P.C.V. valve (Gasoline)													I
16. P.C.V. hoses (Gasoline)													I
17. Battery specific gravity													I

NOTE: (1) Under dusty or other dirty operating conditions, more frequent maintenance is necessary.
 (2) If engine power decreases, black exhaust smoke is emitted or engine noise increases before the maintenance period comes, check and, if necessary, adjust the fuel injection nozzle starting pressure and the fuel spray pattern.

Abbreviations: I = Inspect. Correct or replace if necessary. L = Lubricate R = Replace
 A = Adjust C = Clean D = Drain T = Retighten

MAINTENANCE OPERATION	Months Hundreds of hours	MAINTENANCE INTERVAL											
		1	2	3	4	5	6	7	8	9	10	11	12
		2	4	6	8	10	12	14	16	18	20	22	24
CHASSIS & BODY MAINTENANCE													
1. Brake, inching brake & clutch pedal free play													
2. Hand brake operation													
3. Brake booster operation													
4. Lift chain tension													
5. Carriage rollers for damage													
6. Mast operation													
7. Mast rollers for damage													
8. Lift & tilt cylinder fitting													
9. Lift & tilt cylinder operation													
10. Hydraulic oil pump operation													
11. Torque converter oil	(1)								R				R
12. Torque converter suction filter	(1)								C				C
13. Hydraulic oil	(1)								R				R
14. Hydraulic oil filter	(1)								I				I
15. Differential oil													R
16. Transmission oil													R
17. Brake fluid													R
18. Wheel bearing grease	(1)		L	L	L	L	L	L	L	L	L	L	L
19. Lift chain									L	L	L	L	L
20. Clutch release bearing	(1)		L	L	L	L	L	L	L	L	L	L	L
21. Chain support guide bar									L	L	L	L	L
22. Mast support bushing									L	L	L	L	L
23. All links of chassis			L	L	L	L	L	L	L	L	L	L	L
24. Back-up metals			L	L	L	L	L	L	L	L	L	L	L
25. Thrust metals			L	L	L	L	L	L	L	L	L	L	L
26. Mast rail									L	L	L	L	L
27. Tilt cylinder pin													
28. Hose (Brake hose/P.S. hose/Fuel hose)													

NOTE: (1) Under dusty or other dirty operating conditions, more frequent maintenance is necessary.

Abbreviations: I = Inspect. Correct or replace if necessary. L = Lubricate R = Replace
 C = Clean