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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

February 26, 2007

<SAL> <FIRST> <LAST>, County Manager
County of <MUNICIPALITY>
<ADDRESS>
<TOWN>, North Carolina <ZIP>

Subject: Assessment, Cleanup, and Redevelopment of Old Landfill Sites Within Your Jurisdiction

Dear <SAL> <LAST>:

Governor Easley released his proposed budget February 22, 2007. Included in the budget is a specific item I believe should be of interest to you from a fiscal, environmental and public health protection perspective.

There are approximately 700 old landfills statewide and <LANDFILL#> old landfills in your local area that closed before the State permitting system became effective. These landfills are listed on the Old Landfill Sites portion of the Inactive Hazardous Sites Inventory maintained by the Superfund Section, Division of Waste Management. Any person, including local governments, that arranged for disposal or disposed of waste in the landfills may be held liable for the cleanup of the site. I have attached a report that identifies the location of known old landfill sites in <COUNTY NAME> County that may have closed prior to 1983 and thus qualify for the program described in this letter.

The Division has surveyed old landfills in 47 counties. The results of the survey indicate reason for concern about potential public health and safety impacts of these sites if they are not addressed. Seventy percent of the sites surveyed had a school, church, residence, day care or drinking water source within 1000 feet. The Division has found 102 old landfills that have a drinking water well within 500 feet. Thirteen of the landfills surveyed have residences built over the old landfill. The cost of assessment and cleanup of these old landfill sites can be as high as several million dollars.

Governor Easley's budget establishes a partnership between the State and local governments to both clean up the old landfill sites and provide funding for redevelopment of the sites. Many are in prime locations for redevelopment opportunities. The Governor's budget proposes to pay for cleanup and redevelopment of these sites through a surcharge on disposal of solid waste. The funding mechanism is a fair one. It is based on the idea that those who use solid waste disposal facilities should share responsibility for cleanup of sites used for solid waste disposal in the past that may have been lawful at the time, but did not meet standards that we now know are necessary to protect public health and safety.

The proposed \$2.00 per ton disposal surcharge would apply to residential, commercial, industrial, and construction and demolition debris type waste that is either disposed at a landfill or passes through a transfer station for disposal out-of-state. The State would use revenue from the surcharge to contract for cleanup of the old landfill sites and to provide grants to local government for redevelopment. The funds could also be used across the state to clean up other hazardous substance disposal sites that have no viable responsible party.

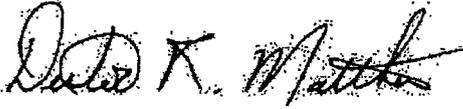
The only tool currently available to the State to ensure cleanup when it is needed is an enforcement action against those who owned, operated, or contributed to old landfills. The Governor's proposal would avoid placing an unreasonable

burden on any one local government and allow us to use our resources for actual cleanup rather than legal action. When old landfill sites were in use, North Carolina citizens, businesses, and industries benefited from their existence as a place to dispose of waste. The surcharge on waste disposal is a way for citizens, businesses, and industries to form a partnership for cleanup and redevelopment of these old landfill sites.

There is great interest this session of the General Assembly in strengthening requirements for landfills permitted in North Carolina. I encourage you to take a close look at legislation that will be introduced, specifically this initiative and what it can bring to your jurisdiction.

If you have questions regarding the program for clean-up of old landfills, please contact Jack Butler, Chief of the Superfund Section, at jack.butler@ncmail.net or call (919)508-8450.

Sincerely,

A handwritten signature in black ink, appearing to read "Dexter R. Matthews". The signature is written in a cursive style with a large initial "D" and "M".

Dexter R. Matthews, Director

cc: David Thompson, NCACC
Jack Butler, Chief – Superfund Section



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

February 27, 2007

<SAL> <FIRST> <LAST>
<TITLE>, <MUNICIPALITY>
<ADDRESS>
<TOWN>, North Carolina <ZIP>

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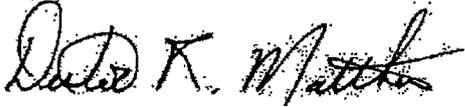
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Sincerely,

A handwritten signature in black ink, appearing to read "Dexter R. Matthews". The signature is written in a cursive style with a large initial "D".

Dexter R. Matthews, Director

cc: Ellis Hankins, NCLM
Jack Butler, Chief – Superfund Section

The mailing list for these letters is filed in a folder in the first file cabinet drawer for the old landfill sites.

A statewide Old Landfill Inventory report is filed in a folder in the first file cabinet drawer for the old landfill sites.



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

January 31, 2005

Mr. Jeff B. Cabe
County Manager
PO Box 575
Robbinsville, North Carolina 28771

Re: Request for Information on old unlined landfills, Graham County.

Dear Mr. Cabe,

The Division of Waste Management, Superfund Section, Inactive Hazardous Sites Branch (Branch) is in the process of cataloging old landfills in the state. This letter is being sent to you to solicit your cooperation in providing information on old unlined landfills that are not subject to Division of Waste Management, Solid Waste Section post-closure regulations in your county. This process is a part of a statewide effort to accurately inventory old dumpsites to aid in safe reuse and to protect public health and the environment.

Once an old landfill site has been identified, the site location, site usage, and vicinity usage is researched. Potential hazards to the public and the environment are then evaluated by risk assessment. Sites then are reviewed based on risk and/or by safe redevelopment requests.

The Branch then works with owners and responsible parties on final solutions for containment of the waste and to ensure safe reuse of the old landfill sites. Safe reuse might involve engineering controls to prevent exposure to wastes, if necessary, and restrictive covenants limiting the property to certain uses and setting conditions for construction or other soil disturbing activities. Annual reporting that restrictive covenants remain in place will be a duty of the current owner.

Known old landfills/dump sites are maintained in a database. Attached is a listing of known sites located in your county. Available information that may include location and years of operation information for each site is also listed. Please review the list and verify or provide information that will more accurately characterize the site(s). If you have knowledge of sites not included on the list, please add the additional sites along with location information, directions, years of operation, and any additional notable information.

Please return the list and any additional information within 90 days to:

Cheryl Marks
Inactive Hazardous Sites Branch
Superfund Section
NC Division of Waste Management
401 Oberlin Road - Suite 150
Raleigh, NC 27605-1350

Or you may email me with your response at Cheryl.Marks@ncmail.net or call with any questions concerning this request at (919) 733-2801, extension 283. Thank you for your cooperation.

Sincerely,

A handwritten signature in cursive script that reads "Cheryl Marks".

Cheryl Marks, Hydrogeologist
Inactive Hazardous Site Branch
NC Superfund Section

Old Landfill Inventory - Location Information

Latitude/Longitude and other data in this report is highly subject to inaccuracies. State Plane coordinates replace latitude/longitude entries as data is collected. These coordinates may also be subject to error.

COUNTY: GRAHAM

Site Name:	FONTANA VILLAGE DUMP	In IHS Inventory?	No
ID Number:	NONCD0000328	Other Agency Lead	SWS
Site Address:		NFA or NFA-Restricted Use?	No
City:	FONTANA VILLAGE	Unable to Locate	<input type="radio"/>

State Plane X:	Latitude:	35.4439
State Plane Y:	Longitude:	-83.838

Directions: OFF HWY 28

LDFL Size (Acres):	2	Present Within 1000 ft of Ldfl			
Property Size (Acres):	5	Church	No	Residence On Ldfl?	No
Date Open:	1941	School	No	Potable Well Within 500 ft?	No
Date Closed:		Day Care	No	Adjoins Perennial SW?	No
		Residential	No		

Notes: PERMIT # 38-02

(End Site Record)

Site Name:	GRAHAM COUNTY MUNICIPAL LDFL	In IHS Inventory?	Yes
ID Number:	NC4120000001	Other Agency Lead	SWS
Site Address:	ATOHAH RD - SR 1	NFA or NFA-Restricted Use?	No
City:	ROBBINSVILLE	Unable to Locate	<input type="radio"/>

State Plane X:	Latitude:
State Plane Y:	Longitude:

Directions: SR 1112 (ATOAH RD)

LDFL Size (Acres):	Present Within 1000 ft of Ldfi		Residence On Ldfi?	No
	Property Size (Acres):	Church		
Date Open:	School	No	Adjoins Perennial SW?	No
Date Closed:	Day Care	No		
	Residential	No		

Notes: PERMIT # 38-01. PARCEL ID 555800FS0001. BACK DEED REF 99-163. AT OF 4/00 OWNED BY US FOREST SERVICE.

(End Site Record)

Site Name:	ROBBINSVILLE DUMP	In IHS Inventory?	No
ID Number:	NONCD0000329	Other Agency Lead	
Site Address:	OLD TALLULAH R	NFA or NFA-Restricted Use?	No
City:	ROBBINSVILLE	Unable to Locate	<input type="radio"/>

State Plane X:	Latitude:	35.3336
State Plane Y:	Longitude:	-83.7975

Directions: OLD TALLULAH RD

LDFL Size (Acres):	3	Present Within 1000 ft of Ldfl		Residence On Ldfl?	No
Property Size (Acres):	5	Church	No	Potable Well Within 500 ft?	No
Date Open:	1964	School	No	Adjoins Perennial SW?	No
Date Closed:	1975	Day Care	No		
		Residential	No		

Notes:

(End Site Record)

Number of Sites: 3

(End County Record)



MICHAEL F. EASLEY, GOVERNOR
WILLIAM G. ROSS, JR., SECRETARY
WILLIAM L. MEYER, DIRECTOR

June 29, 2001

Ms. Jennifer Wendel
NC Site Management Section
US EPA Region IV Waste Division
61 Forsyth Street, 11th Floor
Atlanta, Georgia 30303

Subject: Site Re-Assessment Report
Graham County Municipal Landfill
EPA ID: NC4 120 000 001
Robbinsville, Graham County, North Carolina

Dear Ms. Wendel:

Graham County Municipal Landfill ("Landfill") is located approximately four miles southwest of Robbinsville and two miles north of Snowbird Mountain. The site lies within the boundaries of the Nantahala National Forest along Atoah Creek (Reference 1, pg. 3). The site's geographic coordinates are 35°16'19.63" north latitude and 83°50'38.33" west longitude (Ref. 2).

The site is incorporated under a second CERCLIS listing as the USFS Nantahala National Forest site (EPA ID# NC0 980 557 979) (Ref. 3). Two additional EPA ID numbers have also previously been assigned to this site: NCD 980 557 979 (Ref. 4) and NC-122317723 (Ref. 5).

Between 1973 and 1980, the Landfill received a reported 300,000 gallons of low-moisture sludges from Burlington Industries, Inc. These wastes included 90,000 gallons of nitro-based spraybooth sludges; 120,000 gallons of oil-based spray booth sludges; 45,000 gallons of urea formaldehyde glue sludges; and 36,000 gallons of polyvinyl acetate glue sludges (Ref. 1, pg. 4).

On December 17, 1985, NUS Corporation published a Sampling Investigation Report (SIR) for the US EPA. The SIR included results for a total of eight samples, including three water, two sediment, and three soil samples (Ref. 1, pg. 6).

Two surface water samples were collected from Atoah Creek: one upstream of the site (GC-ACU-01) and one downstream of the site (GC-ACD-02). Manganese (670 ug/l) and cyanide (20 ug/l) were detected at levels significantly above background. This level of cyanide also exceeded Federal and State benchmarks for the protection of human health and the environment (Ref. 6).

Two sediment samples were also collected from Atoah Creek: one upstream of the site (GC-ASU-01) and one downstream of the site (GC-ASD-02). Thirteen polynuclear aromatic hydrocarbons (PAHs) were detected in the downstream sample (GC-ASD-02), including four benzo-PAH compounds, at levels significantly above background. In addition to the organics present, fifteen inorganics were present at levels significantly above background, including cadmium (5.1 mg/kg), chromium (65 mg/kg), nickel (63 mg/kg), vanadium (96 mg/kg), and zinc (300 mg/kg) (Ref. 1).

Three soil samples were collected from the Landfill: a source sample taken from the leachate pathway prior to entering Atoah Creek (GC-LS-03), a second source sample collected in leachate pathway approximately 50 yards above GC-LS-03 (GC-LS-04), and a background sample collected from the top of a hill on the easternmost boundary of the Landfill (GC-BKS-05). Seven PAHs were detected in sample GC-LS-03 at levels significantly above background, while fourteen PAHs were detected in sample GC-LS-04 at levels significantly above background. In addition to the PAHs present, 17 inorganics were detected in sample GC-LS-03 and 15 inorganics were detected in sample GC-LS-04, while no inorganics were detected at all in the background sample (GC-BKS-05) (Ref. 1).

In the December 17, 1985 SIR, NUS Corporation concluded that contaminants from the landfill were leaching into the surface water pathway. PAHs were detected in both the downstream sediment sample (GC-ASD-02) and the leachate pathway soil samples (GC-LS-03 and GC-LS-04) and not in the background samples. Since the Landfill was located in the Nantahala National Forest, the site was referred to the US Forest Service (Ref. 7).

Preliminary Assessments (PAs) were sent to EPA by the US Forest Service in 1990 and again in 1993. A Site Investigation (SI) was requested by the EPA (Ref. 8). The SI field work was started in December 1992, and the SI Report was published in February 1994 by Metcalf & Eddy, Inc. for the US Forest Service. The SI report included work completed for both the Graham County Municipal Landfill and the Swain County Landfill, both of which are located in the Nantahala National Forest (Ref. 9).

Three groundwater samples were collected during the SI: one background sample from an on-site monitoring well (GMW-01) and two on-site monitoring wells downgradient of the waste (GMW-02 and GMW-03). Acetone, 1,2-dichloroethene (cis&trans), benzene, diethylphthalate and manganese were all detected in both downgradient wells (GMW-02 and GMW-03) at levels significantly above background. In addition to the above, GMW-02 also contained vinyl chloride (3J ug/l), chloroethane (4J ug/l), chlorobenzene (2J ug/l), ethylbenzene (2J ug/l), 1,4-dichlorobenzene (5J ug/l), 4-chloro-3-methylphenol (1J ug/l), and cadmium (17.1 ug/l) at levels significantly above background (Ref. 9, pg. 40), with vinyl chloride and 1,4-dichlorobenzene exceeding the

Federal and State benchmarks for the protection of human health and the environment (Ref. 6). GMW-03 also contained tetrachloroethane (1J ug/l) and 4-methylphenol (1J ug/l), in addition to the above, at levels significantly above background, with manganese (7490 ug/l) (Ref. 9, pg. 40) at a level which exceeded the Federal and State benchmarks for the protection of human health and the environment (Ref. 6).

Seven surface water samples were collected during the SI: two from within sediment collection ponds on the landfill (GSW-02 and GSW-04), one from a drainage ditch that discharges to Atoah Creek (GSW-06), one sample upstream of the site along Atoah Creek (GSW-08), and three samples downstream of the site along Atoah Creek (GSW-10, GSW-12, and GSW-52). The only organic detected in an off-site sample downstream of the site (GSW-12) was acetone (3J ug/l). No other organics or inorganics were detected in any of the downstream surface water samples along Atoah Creek (Ref. 9, pg. 42).

Seven sediment samples were collected during the SI: two from within sediment collection ponds on the landfill (GSE-01 and GSE-03), two from a drainage ditch that discharges to Atoah Creek (GSE-05 and GSE-51), one sample upstream of the site along Atoah Creek (GSW-07), and two samples downstream of the site along Atoah Creek (GSW-09 and GSW-11). PAHs were detected in all of the on-site sediment samples (GSE-01, GSE-03, GSE-05, and GSE-51). PAHs were also detected in the first sediment sample directly downstream of the site (GSE-09). Di-n-butylphthalate was the only PAH detected in all of the samples. No other semi-volatile organic or PAH was detected in the background sample along Atoah Creek (GSE-07) or in the farthest downstream sample collected from Atoah Creek (GSE-11) (Ref. 9, pgs. 44-45).

In addition to the PAHs, acetone not attributable to laboratory contamination was detected in one of the sediment ponds (GSE-03 at 28 mg/kg), in the drainage ditch flowing towards Atoah Creek (GSE-05 at 40 mg/kg and GSE-51 at 23 mg/kg), and both of the downstream samples along Atoah Creek (GSE-09 at 0.037 mg/kg and GSE-11 at 0.003J mg/kg). No acetone was detected in the background sediment sample from Atoah Creek (GSE-07) (Ref. 9, pgs. 44-45).

Inorganics were detected in all of the sediment samples collected. However, there were no significantly higher concentrations detected in either of the downstream samples collected from Atoah Creek (GSE-09 and GSE-11) (Ref. 9, pgs. 44-45).

In the February 1994 SI, Metcalf & Eddy recommended that an additional background monitoring well be installed and additional groundwater monitoring continue due to the presence of volatile organics and inorganics. Metcalf & Eddy also concluded that there was no adverse impact to Atoah Creek by the Landfill (Ref. 9, pgs. 48-52).

Ms. Jennifer Wendel
June 29, 2001

However, Metcalf & Eddy recommended resampling of the Landfill annually as part of the Landfill's monitoring program (Ref. 9, pg. 54).

According to the SI, over 1200 people are located within the 4-mile radius of the Landfill are served by drinking-water wells (Ref. 9, pgs. 61-64). The nearest drinking water well to the landfill is located approximately 400 feet away (Ref. 9, pg. 60).

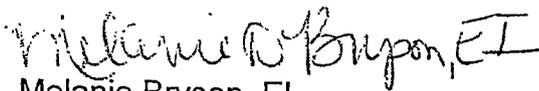
According to Mr. Scott Loftis, Fisheries Biologist with the NC Wildlife Resources Commission, Atoah Creek is considered a fishery. Trout are fished along the entire 15-mile surface water pathway, with the heaviest pressure being along the one to two miles near the headwaters of Atoah Creek on the public lands owned by the US Forest Service (Ref. 10). A fishery was not documented for Atoah Creek during the SI (Ref. 9, pg. 75).

There are no surface water intakes located along the 15-mile surface water pathway (Ref. 9, pg. 69). The nearest qualifying wetland is located approximately 1.75 miles downstream of the Landfill (Ref. 11). The SI conducted for the US Forest Service indicated that no wetlands were present along the 15-mile surface water pathway (Ref. 9, pg. 70).

Based on a review of available file information and previous investigations of the Landfill, the observed release of site contaminants into a fishery, and the potential threat to the groundwater users, the North Carolina Superfund Section recommends that the site be assigned further action under CERCLA.

Please feel free to contact me at (919) 733-2801 ext. 316 or by e-mail at melanie.bryson@ncmail.net if you have any questions or comments.

Sincerely,



Melanie Bryson, EI
Environmental Engineer
NC Superfund Section



Dan LaMontagne, Head
Site Evaluation and Removal Branch
NC Superfund Section

CC: Scott Ross – File

CC: (Letter Only)
Charlotte Jesneck