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Raleigh Central Office



December 13, 2010

Mr. Jeff Dellinger
Industrial Hygiene Consultant
Health Hazards Control Unit
NC DHHS/Division of Public Health
2nd Floor, Room D-1
5505 Six Forks Road
Raleigh, North Carolina 27609



**RE: Potential Contact with Asbestos-Contaminated Waste During the Expansion
of the City of Durham Landfill Gas Collection and Control System**

Dear Jeff:

On behalf of Methane Power, dba MP Developer, LLC, Richardson Smith Gardner and Associates, Inc. (RSG), has prepared the enclosed Asbestos Work Plan for the above mentioned project. This letter serves as notification of potential uncovering of asbestos-contaminated waste during excavation and drilling activities. The City of Durham Landfill project is located in Durham, North Carolina at 2115 East Club Boulevard. Construction is anticipated to begin in late December 2010, reaching completion by February 2011.

The proposed Asbestos Work Plan details procedures to be taken to identify, handle, store, and dispose of suspected asbestos containing waste if encountered. A separate roll-off container box, with cover, will be provided to store these materials, until they can be tested and transported to the appropriate area for disposal. The project drawings are attached for your review. We look forward to meeting with you to review this plan in the near future.

Please feel free to contact me with any questions.

Cordially,

Richardson Smith Gardner and Associates, Inc.

Stacy A. Smith, P.E.
President, Senior Engineer

Matt Lamb
Environmental Scientist

SAS/ggm

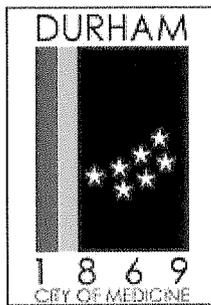
Att.

Cc: Amy Ratliff, P.E., Methane Power
Ming Chao, P.E., NCDENR
Simon Lobdell, P.E., C.E. III, City of Durham
File

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ASBESTOS WORK PLAN
Asbestos Containing Waste Material Management

MP Developer, LLC
Durham Municipal Solid Waste Landfill Facility
Landfill Gas Collection and Control System
Expansion



Prepared for:
MP Developer, LLC
Huntersville, North Carolina

December 2010




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ASBESTOS WORK PLAN
Asbestos Containing Waste Material Management
(North Carolina)

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1.0 INTRODUCTION

This Asbestos Work Plan (Plan) is prepared on behalf of Methane Power, Inc. dba MP Developer, LLC by Richardson Smith Gardner and Associates (RSG) for the Landfill Gas Collection System (LFGCS) expansion at the closed City of Durham Landfill (Solid Waste Permit No. 32-01) located in Durham, North Carolina. This plan addresses address procedures to identify and manage potential asbestos-containing material during well drilling, trenching, or other activities at the facility. This project includes drilling and installation of eight (8) landfill gas wells, ranging in depth from approximately 45 to 90 feet. Approximately 7,200 feet of trenching is planned for installation of new LFG header lines, and connection of new wells to existing or new headers with new lateral piping. Design locations for wells and trenches are shown in the **Attached** design drawings. This project is tentatively scheduled between December 2010 and February 2011.

1.1 Applicability

This Plan is required due to the fact that the landfill reportedly accepted asbestos waste at some point during its operating lifetime. Accurate asbestos-containing material (ACM) disposal records were not available at the time of writing, neither are adequate records available to demonstrate that no asbestos waste is located in the project area. Therefore, this plan shall be implemented during the project, and followed as a precaution in case asbestos waste is disturbed.

This document is intended to provide direction for the Contractor involved in excavation and drilling activities in areas with known or suspected asbestos-contaminated waste, or where asbestos-contaminated waste is discovered. This document is meant to assist in compliance with Federal, State, and Local regulations. This document is not intended to take the place of any regulations or the Contractor's responsibility of his employees, subcontractors, or agents. It is critical that the Contractor realize the context of the subject matter by being familiar with the current regulations, as well as Article 48 of the General Conditions of the Contract.

1.2 Definitions and Abbreviations

As used herein, the following terms are defined:

Adequately Wet (40 CFR §61.141)

To sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed coming from asbestos-containing material, then that material has not been adequately wetted. However, the absence of visible emissions is not sufficient evidence of being adequately wet.

Asbestos (40 CFR §61.141)

The asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite),

cummingtonite-grunerite, anthophyllite, and actinolite-tremolite.

Asbestos Waste Disposal Area

Approved area for the disposal of asbestos waste at a solid waste facility.

Friable Asbestos-Containing Material (ACM)

Any material containing more than one percent (1%) asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy (PLM), that, when dry, can be crumbled, pulverized or reduced to powder by hand pressure. (Sec. 61.141). Friable ACM readily releases asbestos fibers into the air when damaged or disturbed.

NESHAP

National Emission Standards for Hazardous Air Pollutants

Non-friable (US EPA, Region 4 - *Asbestos Enforcement Bulletin, June 2003*)

AMC which cannot be crumbled, pulverized or reduced to powder by hand pressure, Nonfriable ACM would NOT readily release fibers into the air unless the material was severely damaged.

OSHA

Occupational Safety and Health Administration

Regulated Asbestos-Containing Material (RACM) (US EPA, Region 4 - *Asbestos/NESHAP Regulated Asbestos Containing Materials Guidance*)

(a) friable asbestos material, (b) Category I non-friable ACM that has become friable, (c) Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by this subpart.

Trained Asbestos Supervisor (TAS)

A person who, **at a minimum**, has completed a five (5) day asbestos abatement contractor/supervisor training course as outlined in the EPA's Asbestos Model Accreditation Plan (40 CFR §763, Subpart E, App. C (B)(2)). Full accreditation is not required for this position.

Accredited Asbestos Inspector (AAI)

A person who, **at a minimum**, is a NC Accredited Asbestos Inspector as outlined in the EPA's Asbestos Model Accreditation Plan (40 CFR §763, Subpart E, App. C (B)(3)). Full accreditation **is required** for this position.

1.3 Regulatory Overview

1.3.1 Potential Asbestos-Contaminated Waste

The following regulation requiring notification shall be followed before digging/drilling begins on a project with **potential** for asbestos-contaminated waste:

<u>Regulation</u>	<u>Citation</u>
NESHAP	40 CFR §61.151 (d) and 40 CFR §61.154 (j)

These requirements are listed in **Section 2.4**.

1.3.2 OSHA Regulations

If asbestos-contaminated waste is found, the following OSHA regulations shall be followed by the contractor.

- OSHA 29 CFR 1926.1101 and
- OSHA 29 CFR 1910.1001

1.3.3 Identified Asbestos-Contaminated Waste

The following regulations, **at a minimum**, should be followed **if** asbestos-contaminated waste is identified. Asbestos-contaminated waste identified should be treated as if it were new asbestos waste entering a landfill and procedures for handling, transporting, and disposal in an asbestos waste disposal area should be followed, as required by the following rules:

<u>Regulation</u>	<u>Citation</u>
NESHAP	40 CFR §61
OSHA	29 CFR 1926.1101
OSHA	29 CFR 1910.1001
NC General Statutes	NC GS §130A, Article 19
NC Solid Waste Rules	15A NCAC 13B .0505 11(d)
NC Solid Waste Rules	15A NCAC 13B .1626 1(d)

1.3.4 Delegated Authority

The Health Hazards Control Unit, NC DHHS Division of Public Health has been delegated authority by the US Environmental Protection Agency to enforce the NESHAP regulations in all NC counties except the following counties. The following county agencies should be notified before digging/drilling begins on a project with **potential** for asbestos-contaminated waste:

Buncombe County

Western North Carolina Regional Air Pollution Control Agency
49 Mt. Carmel Road
Asheville, NC 28806
Mr. David Brigman, Director
Telephone: 828-250-6777

Forsyth County

Environmental Affairs Department
537 N. Spruce Street
Winston-Salem, NC 27101-1262
Mr. Robert R. Fulp, Director
Telephone: 336-703-2440

Mecklenburg County

Mecklenburg County Land Use and Environmental Services Agency
Mecklenburg Air Quality
Mr. Chuck Greco
Air Quality Supervisor
700 N. Tryon Street
Charlotte, NC 28202
Telephone: 704-336-5430

1.3.5 Administrative Agency

The following state agency should be notified, in accordance with 40 CFR §61.151 (d) and 40 CFR §61.154 (j), before digging/drilling begins on a project with **potential** for asbestos-contaminated waste:

Health Hazards Control Unit
NC DHHS/Division of Public Health
2nd Floor, Room D-1
5505 Six Forks Road
Raleigh, NC 27609-3806
Mr. Jeffery W. Dellinger, Industrial Hygiene Consultant
Telephone: 919-707-5950
Fax: 919-870-4808

1.4 Project Contacts

This project is performed by Methane Power, dba MP Developer, LLC. The City of Durham owns and maintains the landfill in post-closure care. Involved parties include:

Owner:

City of Durham Landfill
c/o Department of Water Management
1600 Mist Lake Drive
Durham, North Carolina 27704
Contact: Simon Lobdell, P.E., C.E. III, City of Durham
Phone: (919) 560-4381x35201
Email: Simon.lobdell@durhamnc.gov

Developer:

Methane Power, dba MP Developer, LLC
4224 Lazyriver Drive, Durham, NC 27712
Contact: Ms. Amy Ratliff, P.E.
Phone: (919) 294-4770
Email: amy@methanepower.net

Engineer:

Richardson Smith Gardner & Associates, Inc.
14 N. Boylan Avenue, Raleigh, NC 27603
Contact: Mr. Stacey A. Smith, P.E.
Phone: (919) 828-0577, ext. 127
Email: stacey@rsgengineers.com

General Contractor:

Chandler Construction Services, Inc.
1511 Ninety Six Highway, Ninety Six, SC 29666
Contact: Mr. Ted Thompson
Phone: (864) 227-3221
Email: tthompson@chandlerconstruction.com

2.0 PROJECT ACTIVITIES

The landfill gas collection system expansion projects will include drilling of eight (8) landfill gas wells, ranging in depth from approximately 45 to 90 feet. All bores will be approximately 36 inches in diameter. Associated trenching is also planned through the course of this project. Approximate locations for individual wells, as well as approximate trenching locations, are shown in the **Attached** design drawings.

Reportedly, according to site personnel, the normal asbestos-handling procedure during operations of the landfill was to bury asbestos in virgin ground, in accordance with 15A NCAC 13B .0505 11(d). Based on this information, encountering asbestos waste is unlikely except in excavations in residual soil around the perimeter of the facility, or in the lower 10% of the total depth of LFG wells. No excavations are planned in the residual soils around the perimeter of the facility; however, the eight (8) planned landfill gas (LFG) extraction wells will be advanced to the soils beneath the waste in the landfill, and may encounter potential asbestos-containing waste (friable or non-friable). No unnecessary waste disturbance will be planned and the steps below shall be followed during the project.

2.1 Notification

In accordance with **40 CFR §61** of the NESHAP regulations, the following shall be followed:

- The NESHAP Administrator shall be notified of the **potential** of uncovering asbestos-contaminated waste *in writing at least 45 days prior to excavating or otherwise disturbing any asbestos containing material that has been deposited at a waste disposal site and is covered.*

At a minimum, this notification shall include the following:

1. Scheduled starting and completion date.
2. Reason for disturbing the waste.
3. Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated potential asbestos-containing material. If deemed necessary, the Administrator may require changes in the

4. emission control procedures to be used.
4. Location of any temporary storage site and the final disposal site.
5. Site Plan

2.2 Personnel

Trained Asbestos Supervisor: It is required to have at least one (1) trained asbestos supervisor (TAS) in the immediate vicinity of the waste excavation to oversee the work area setup and maintenance.

Accredited Asbestos Inspector: An accredited asbestos inspector (AAI) is required if excavated waste and other materials are to be visually inspected to determine the presence of potential asbestos-containing waste.

2.3 Waste Handling Procedures

Below is a description of the different methods used to handle potentially asbestos-containing waste. The first method assumes all excavated material is asbestos-containing waste, and the second method handles excavated material as potential asbestos-containing waste, to be confirmed by an AAI. **Figure 1** is a decision chart for the set-up, inspection and disposal process for this project.

2.3.1 Handling of Asbestos-Containing Waste

If all excavated waste is to be treated as asbestos-containing waste, any excavated waste shall be placed in the covered containers as it is brought out of the bore hole or trench. The potential asbestos-containing waste shall be kept adequately wet in the container by the Contractor spraying the waste with water such that no particles become airborne. The container shall remain closed when active filling is not underway. It is the responsibility of the TAS to look for airborne dust from the excavated waste to ensure that the waste is adequately wet at all times.

The TAS shall setup the work area such that the operator, his/her employees, and the public are protected while disturbing asbestos containing waste throughout the process until disposal of all asbestos waste has been completed, as follows:

- The work area shall include adequate fencing and signage to delineate the disturbance area. This fencing shall be orange safety fencing with signage stating "Potential Asbestos Containing Material Disturbance Area-- Authorized Personnel Only." The fencing shall enclose enough area to adequately allow for project activities.
- A gravel access roadway crosses the landfill, and is used by the public to access yard waste disposal areas. Public exposure to potential asbestos-

containing waste could occur along this roadway, therefore, care should be taken to minimize exposure to potential asbestos containing material at this location.

- The TAS is responsible for determining the locations of any covered containers, inside the fencing, that may be used to hold waste from potential asbestos containing materials. These containers should also have signage stating “Potential Asbestos Containing Material--Authorized Personnel Only.”
- All waste from friable and all suspected asbestos materials must be maintained adequately wet by the contractor, properly contained, tested, transported, and disposed of as described in **Section 2.3.2** and **Section 2.3.3**.

2.3.2 Inspection of Excavated Waste

If there is potential for ACM in the excavated waste and an AAI will be inspecting each load to determine if the waste is suspect, the following procedure shall be followed. As waste is excavated from the well or trench, it will be placed adjacent to the excavation location. An AAI shall observe the waste for signs of asbestos containing material. If the excavated waste does not appear to be contaminated by asbestos, the waste will be transported to the City of Durham transfer facility. If potential asbestos-containing waste is identified, all suspected waste will be placed in containers and tested for asbestos. If the waste does not contain asbestos, it will be transported to the City of Durham transfer station. If the waste contains asbestos, its disposal will be as described in Section 2.3.3 of this document.

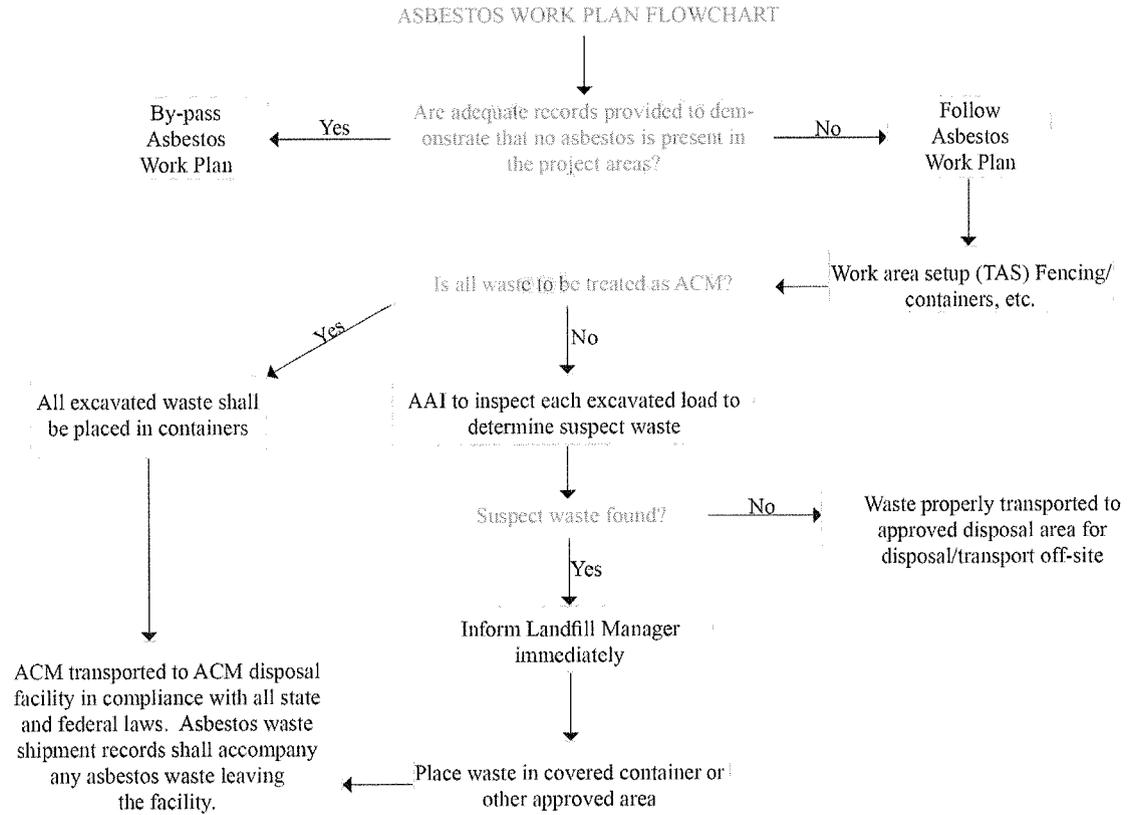
If asbestos contaminated waste is identified or suspected by the AAI, the Site Manager shall be informed immediately and the waste shall be placed in a covered container or another TAS approved area, adjacent to the excavation location.

All excavated waste (suspect or not) shall be kept adequately wet by spraying water as needed from an onsite tank until covered.

2.3.3 Disposal

All friable and all regulated asbestos containing material must be maintained adequately wet, properly contained and disposed of in a manner consistent with 10A NCAC 41C.0600. Asbestos containing waste will be transported in manner consistent with 49 CFR 107, 171-173 and disposed of in a facility permitted to accept asbestos.

Figure 1: Asbestos Work Plan Flow Chart



* All excavated waste (suspect or not) shall be kept adequately wet throughout this entire process.