File 4840 REXAM

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 6
Dulles State Office Building, 317 Washington Street, Watertown, New York 13601-3787
Phone: (315) 785-2513 • **FAX:** (315) 785-2422
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

FACSIMILE

TO: Mike Komoroske (518) 402-9773

FROM: Peter S. Ouderkirk 315-785-2422 (fax), 785-2513 (work)

SUBJ: REXAM

DATE: Wednesday, October 16, 2002

PAGES: 6

Mike:

I had e-mailed you all the data. Here is the faxed copies for your review.

Thanks

Peter

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 6
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Phone: (315) 785-2513 • **FAX:** (315) 785-2422
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

MEMORANDUM

TO: DARRELL M. SWEREDOSKI
FROM: PETER S. OUDERKIRK THRU MIKE KOMOROSKE
SUBJECT: **FIBERMARK DSI, INC. (FORMER REXAM DIS INC. FACILITY)**
VCA # V00525-6 , INVESTIGATION WORK PLAN APPROVAL

_____ Approved _____ Date

DATE: October 16, 2002

Attached is an Investigation Work Plan for the subject site. As discussed below, we believe the scope and methodology of the investigation meets the requirements of the Program. We recommend your approval.

Volunteer: REXAM, Inc. (PRP-Volunteer)

Site Location: Bridge Street, north side of the Black River, Village of Brownsville, Jefferson County, Region 6

Project Description: The paper mill is located in the Village of Brownsville within a mixed residential/ commercial area. The site borders the Black River gorge and the Philomel Stream. The original building, constructed in 1814, was used as a textile mill. Subsequent use and construction of buildings have been for the paper making and processing industry. Based on preliminary investigations, various semi-volatile organics, petroleum compounds and metals have been found in and/or around the facility. The investigation will focus on determining if any residual contamination remains from the former operation that would require remediation. The Volunteer - PRP is responsible for bringing the site into environmental compliance for the new owner. No off site issues have been identified at this time, however the site investigation will look at any migration pathways. No other issues have been identified.

Contemplated Use: Restricted industrial use. Volunteer intends that the Site continue to be used as an industrial facility for the manufacturing of latex saturated paper.

Registry Status: No Registry package has been prepared. At this time the data does not indicate that this site would qualify for inclusion on the Registry.

Quality Assurance/Quality Control: Appropriate QA/QC procedures (including DUSR) are included in the Work Plan. The work plan for this VCA has been developed utilizing data from previous investigations. This data is been found to be both relevant and useable.

Citizen Participation: A mailing list and fact sheet have been prepared. A fact sheet will be issued to surrounding property owners, local elected officials, and other interested groups/media prior to the start of field work.

Health Department Concurrence: Written approval for this project has been obtained from the NYSDOH (See attached letter dated September 25, 2002.)

Recommendation: The Work Plan is complete and will provide the information needed to make a decision about remediation. I recommend that you approve the investigation work plan.

cc: w/o att. Dale Desnoyers, DER Acting Division Director
Sandra LeBarron, Regional Director
Ed Belmore, Bureau Director
Mike Rivara, NYSDOH VCP Coordinator
John Sheehan, NYSDOH Project Manager

VCP Work Plan Consistency Review Checklist

Site Name: FiberMark DSI, Inc.
Site No.: V-00525-6
Project Mgr.: Peter S. Ouderkirk
Work Plan Date: July 2002

Date of Review: October 16, 2002
Reviewer: Darrell M. Sweredoski
Volunteer: REXAM DSI, Inc.
Agreement Date: June 10, 2002

ok?	*Item*	*Notes*
	General	
√	• site boundaries & features clearly defined?	Yes
√	• surrounding land uses described?	Commercial/Industrial
√	• prior uses/contamination described?	Yes
√	• Volunteer status?	Volunteer is a Potentially Response Party Volunteer
√	• must off-site issues be addressed? adequate?	Will be evaluated
√	• SEQRA addressed if necessary?	N/A
√	• has a listing package been prepared?	Site conditions do not warrant listing.
√	• intended future use described?	Commercial/Industrial
√	• concurrence from State/Co. DOH/others?	Yes
√	• complete and approved application?	Yes
√	• worker & community HASPs?	Yes
√	• definition of existing contamination ok?	Yes
	Scope of Investigation	
√	• adequate to evaluate media, volumes, extent?	Extensive past investigations has helped delineate much of site.
√	• adequate methods of investigation?	Reviewed by technical staff in region and central office
√	• adequate QA/QC?	Reviewed by technical staff in central office
√	• source areas defined?	No sources known or suspected. Residual contamination.
√	• adequate on & off-site exposure assessment?	Current conditions have been discussed, further conditions will be evaluated during investigation.
√	• need risk assessment?	Will be determined based on findings of investigation.
√	• adequate documentation/reporting?	Yes
√	• fish & wildlife impact analysis?	If off site migration is found, analysis may be warranted.

ok?	*Item*	*Notes*
	Features of Remedy	
☐	• adequate remedial goals?	
☐	• remedy assessed by PE against factors in §375-1.10(c)?	
☐	• remedy will mitigate threats on & off-site?	
☐	• obvious contamination addressed?	
☐	• source control if necessary?	
☐	• is the remedy adequately documented (engineering report, PRAP/ROD)?	
☐	• adequate O&M?	
☐	• adequate site use restrictions?	
☐	• adequate post-RA verification and QA/QC?	
☐	•	
	Citizen Participation	
√	• appropriate CP activities planned by DEC?	Yes
√	• appropriate CP activities completed?	Will be when work is approved.
☐	• ENB Notice required? Done?	N/A
	Additional Considerations	
√	• consistency between legal & technical documents? (VCA consistent w/Work Plan?)	Yes
√	• VCA contains adequate definition of existing contamination?	Yes
√	• Exhibit B of agreement contains listing of all components of "Work Plan" (final dated versions of reports, appendices, modifying correspondence, etc.)	Will be appended when approved.

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Flanigan Square, 547 River Street, Troy, New York 12180-2216

Antonia C. Novello, M.D., M.P.H., Dr.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

September 25, 2002

Mr. Darrell Sweredoski
NYS Dept. of Environmental Conservation
Region 6
NYS Office Building
317 Washington Street
Watertown, NY 13601

Re: Former Rexam DSI, Inc.
Site ID #V005256
(V) Brownville, Jefferson Co.

Dear Mr. Sweredoski:

I reviewed the Site Investigation Work Plan and the Draft Work Plan approval memo regarding the Former Rexam DSI site in the Village of Brownville, Jefferson County. The facility is a paper mill located on Bridge Street on the bank of the Black River in the Village of Brownville and is being investigated under a voluntary clean-up agreement for a property transfer. The use of the property will remain the same. The mill is built into the bedrock riverbank and two areas of the bedrock wall show oil staining. One with lubricating oil from 19th century vintage hydropower mill and one with #6 fuel oil from a more recent storage tank. These areas will be pressure washed and coated to eliminate potential for exposure. Additional investigation of soil and groundwater will also be conducted to the north and east of the facility. The remainder of the building is at waters edge.

With this, I agree that the work plan is complete and will provide information needed to make decisions regarding any additional remediation that may be necessary.

Sincerely,

John G. Sheehan
Public Health Specialist III
Bureau of Environmental Exposure Investigation

cc: Mr. G. Litwin/Mr. M. Rivara/File
Mr. T. Boxberger, WDO
Mr. M. Komoroske, DEC

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Erin M. Crotty
Commissioner

September 30, 2002

Mr. Mark P. Roman
21 Priscilla Lane
Howell, NJ 07731

RE: Voluntary Cleanup Project
Site Investigation Work Plan
FiberMark DSI, Inc. (Former REXAM DSI, Inc. Facility) VCA # V00525-6

Dear Mark P. Roman

The Department has completed its review of the Work Plan and your letter dated September 18, 2002 for the subject site. Based upon the information and representations given, as itemized below, Work Plan is hereby approved.

1. The Site Investigation Work Plan, dated July 2002;
2. Envision Environmental's response to comments letter, dated September 18, 2002;
3. Phase I Environmental Site Assessment Report Volume I & II, dated August 2000; and
4. Phase II Environmental Site Assessment Report Volume I & II dated December 2000.

The Work Plan consists of the Site Investigation Work Plan, dated July 2002 and Envision Environmental's response to comments letter, dated September 18, 2002.

Please contact Peter Ouderkirk at your earliest convenience to discuss scheduling of the various tasks.

Sincerely,

Darrell M. Sweredoski
Regional VCP Coordinator

cc: w/o att. Dale Desnoyers, DER Acting Division Director
Mike Komoroske, DER VCP Coordinator
Mike Rivara, NYSDOH VCP Coordinator
John Sheehan, NYSDOH Project Manager

September 30, 2002

DMS:

Ready to Go.

1. VCA Approval Form Memo
2. DOH Letter of approval - September 25, 2002
3. Check List
4. Copy of Work Plan
5. Copy of Response to Comments

Peter

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 6
Dulles State Office Building, 317 Washington Street, Watertown, New York 13601-3787
Phone: (315) 785-2513 • **FAX:** (315) 785-2422
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Erin M. Crotty
Commissioner

MEMORANDUM

TO: DARRELL M. SWEREDOSKI
FROM: PETER S. OUDERKIRK THRU MIKE KOMOROSKE
SUBJECT: **FIBERMARK DSI, INC. (FORMER REXAM DIS INC. FACILITY)**
VCA # V00525-6 , INVESTIGATION WORK PLAN APPROVAL

_____ Approved _____ Date

DATE: September 20, 2002

Attached is an Investigation Work Plan for the subject site. As discussed below, we believe the scope and methodology of the investigation meets the requirements of the Program. We recommend your approval.

Volunteer: REXAM, Inc. (PRP-Volunteer)

Site Location: Bridge Street, north side of the Black River, Village of Brownsville, Jefferson County, Region 6

Project Description: The paper mill is located in the Village of Brownsville within a mixed residential/ commercial area. The site borders the Black River gorge and the Philomel Stream. The original building, constructed in 1814, was used as a textile mill. Subsequent use and construction of buildings have been for the paper making and processing industry. Based on preliminary investigations, various semi-volatile organics, petroleum compounds and metals have been found in and/or around the facility. The investigation will focus on determining if any residual contamination remains from the former operation that would require remediation. The Volunteer - PRP is responsible for bringing the site into environmental compliance for the new owner. No off site issues have been identified at this time, however the site investigation will look at any migration pathways. No other issues have been identified.

Contemplated Use: Restricted industrial use. Volunteer intends that the Site continue to be used as an industrial facility for the manufacturing of latex saturated paper.

Registry Status: No Registry package has been prepared. At this time the data does not indicate that this site would qualify for inclusion on the Registry.

Quality Assurance/Quality Control: Appropriate QA/QC procedures (including DUSR) are included in the Work Plan. The work plan for this VCA has been developed utilizing data from previous investigations. This data is been found to be both relevant and useable.

Citizen Participation: A mailing list and fact sheet have been prepared. A fact sheet will be issued to surrounding property owners, local elected officials, and other interested groups/media prior to the start of field work.

Health Department Concurrence: Written approval for this project has been obtained from the NYSDOH (See attached letter dated September 25, 2002.)

Recommendation: The Work Plan is complete and will provide the information needed to make a decision about remediation. I recommend that you approve the investigation work plan.

cc: w/o att. Dale Desnoyers, DER Acting Division Director
Sandra LeBarron, Regional Director
Ed Belmore, Bureau Director
Mike Rivara, NYSDOH VCP Coordinator
John Sheehan, NYSDOH Project Manager

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Flanigan Square, 547 River Street, Troy, New York 12180-2216

Antonia C. Novello, M.D., M.P.H., Dr.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

September 25, 2002

Mr. Darrell Sweredoski
NYS Dept. of Environmental Conservation
Region 6
NYS Office Building
317 Washington Street
Watertown, NY 13601

Re: Former Rexam DSI, Inc.
Site ID #V005256
(V) Brownville, Jefferson Co.

Dear Mr. Sweredoski:

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With this, I agree that the work plan is complete and will provide information needed to make decisions regarding any additional remediation that may be necessary.

Sincerely,

John G. Sheehan

Public Health Specialist III

Bureau of Environmental Exposure Investigation

cc: Mr. G. Litwin/Mr. M. Rivara/File

Mr. T. Boxberger, WDO

Mr. M. Komoroske, DEC

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VCP Work Plan Consistency Review Checklist

Site Name: FiberMark DSI, Inc.
Site No.: V-00525-6
Project Mgr.: Peter S. Ouderkirk
Work Plan Date: July 2002

Date of Review: September 18, 2002
Reviewer: Darrell M. Sweredoski
Volunteer: REXAM DSI, Inc.
Agreement Date: June 10, 2002

ok?	*Item*	*Notes*
	General	
√	• site boundaries & features clearly defined?	Yes
√	• surrounding land uses described?	Commercial/Industrial
√	• prior uses/contamination described?	Yes
√	• Volunteer status?	Volunteer is a Potentially Response Party Volunteer
√	• must off-site issues be addressed? adequate?	Will be evaluated
√	• SEQRA addressed if necessary?	N/A
√	• has a listing package been prepared?	Site conditions do not warrant listing.
√	• intended future use described?	Commercial/Industrial
√	• concurrence from State/Co. DOH/others?	Yes
√	• complete and approved application?	Yes
√	• worker & community HASPs?	Yes
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√	• adequate methods of investigation?	Reviewed by technical staff in region and central office
√	• adequate QA/QC?	Reviewed by technical staff in central office
√	• source areas defined?	No sources known or suspected. Residual contamination.
√	• adequate on & off-site exposure assessment?	Current conditions have been discussed, further conditions will be evaluated during investigation.
√	• need risk assessment?	Will be determined based on findings of investigation.
√	• adequate documentation/reporting?	Yes
√	• fish & wildlife impact analysis?	If off site migration is found, analysis may be warranted.

ok?	*Item*	*Notes*
	Features of Remedy	
☐	• adequate remedial goals?	
☐	• remedy assessed by PE against factors in §375-1.10(c)?	
☐	• remedy will mitigate threats on & off-site?	
☐	• obvious contamination addressed?	
☐	• source control if necessary?	
☐	• is the remedy adequately documented (engineering report, PRAP/ROD)?	
☐	• adequate O&M?	
☐	• adequate site use restrictions?	
☐	• adequate post-RA verification and QA/QC?	
☐	•	
	Citizen Participation	
√	• appropriate CP activities planned by DEC?	Yes
√	• appropriate CP activities completed?	Will be when work is approved.
☐	• ENB Notice required? Done?	N/A
	Additional Considerations	
√	• consistency between legal & technical documents? (VCA consistent w/Work Plan?)	Yes
√	• VCA contains adequate definition of existing contamination?	Yes
√	• Exhibit B of agreement contains listing of all components of "Work Plan" (final dated versions of reports, appendices, modifying correspondence, etc.)	Will be appended when approved.

TO John Sheehan

File 4840
Rexam

ENVISION ENVIRONMENTAL, INC.

September 18, 2002

Mr. Peter Ouderkirk
New York State Department of Environmental Conservation
State Office Building
317 Washington Street
Watertown, NY 13601

RE: Site Investigation Workplan Addendum
FiberMark DSI Inc. (Former REXAM DSI INC. Facility)
Bridge Street, Brownville, Jefferson County, NY
VCP Site No. V00525-6
Index No. B6-0610-02-03
ENVISION Project ID: 601.REX

Dear Mr. Ouderkirk:

The following information is being submitted as a follow-up to your August 26, 2002 letter and our telephone conversations pertaining to the Site Investigation Workplan for the referenced facility. The NYSDEC August 26, 2002 letter offered review comments to the Site Investigation Workplan, which was prepared by ENVISION ENVIRONMENTAL, INC. (ENVISION) and submitted to the NYSDEC on July 26, 2002. As discussed during our telephone conversations, this response letter will serve as an addendum to the previously submitted Site Investigation Workplan.

The following addresses the NYSDEC comments in the same order as they appear in the August 26, 2002 letter. As discussed during our telephone conversations, the intention of this submittal is to provide the NYSDEC with confirmation that we will incorporate the NYSDEC comments into the Site Investigation Workplan.

Comment 1 - Section 5.0 QA/QC Plan: ENVISION will be using the services of Patrick Mulrooney to prepare the Data Usability Summary Report (DUSR) for the soil and groundwater sampling to be conducted at the FiberMark facility. Mr. Mulrooney's current resume is included at Attachment 1 to this letter. As can be seen from the resume, Mr. Mulrooney has over twenty (20) years of experience with data validation, quality control, sampling and laboratory analysis. Mr. Mulrooney has reviewed hundreds of technical analytical reports including data validation reports for a variety of analytical parameters. Mr. Mulrooney's experience has included the management of a multi-state certified analytical laboratory, which involved direct responsible charge of the laboratory, along with being responsible for data validation on a number of organic and inorganic parameters. Please advise if additional information is needed on Mr. Mulrooney's experience.

Comment 2 - Section 5.0 QA/QC Plan: ENVISION will expand Table 1 from the Site Investigation Workplan with any missing information from the following list to form an Analytical Methods/Quality Assurance Summary Table:

- Matrix type
- Number or frequency of samples to be collected per matrix
- Number of field and trip blanks per matrix
- Analytical parameters to be measured per matrix
- Analytical methods to be used per matrix
- The number and type of matrix spike and matrix spike duplicate samples to be collected
- The number and type of duplicate samples to be collected
- The number and type of split samples to be collected
- The number and type of performance evaluation samples to be analyzed
- Sample preservation to be used per analytical method and sample matrix
- Sample holding times to be used per analytical method and sample matrix

Comment 3 – Appendix 3 Health and Safety Plan: During all intrusive activities (soil sampling and monitoring well installation), ENVISION will conduct dust monitoring according to the protocol outlined in TAGM 4031 (see Attachment 2). We anticipate using a DataRAM monitoring instrument, which measures particulate matter real time and has a built in alarm and data logger, which can be set to the required averaging time. This NYSDEC comment also advised that the NYSDOH requires monitoring for volatile organic compounds (VOCs) as part of a Community Air Monitoring Plan. Please note that VOCs are not a contaminant of concern at this site based on sampling data obtained during the due diligence activities conducted by ENVISION. Recognizing this, please confirm if VOC monitoring is still a requirement. If still required, ENVISION will monitor the perimeter work area for VOCs following the NYSDOH Community Air Monitoring Plan for Intrusive Activities (see Attachment 3) during soil sampling, monitoring well installation, and groundwater sampling activities.

As mentioned, this addendum to the Site Investigation Workplan will be incorporated into one document (Revised Site Investigation Workplan) prior to commencing the sampling activities. Please advise if you want any additional information incorporated into the revised workplan. We appreciate your continued support in this matter. Should you have any questions, please feel free to contact me at any time.

Very truly yours,

Mark P. Roman, CHMM
President

cc: Frank Brown – REXAM
W. Spreeman – FiberMark, Inc.
Jonathan Rose – FiberMark DSI, Inc.

ENVISION
ENVIRONMENTAL, INC.

ATTACHMENT 1

Patrick Mulrooney Resume

PATRICK J. MULROONEY

ENVIRONMENTAL HEALTH AND SAFETY CONSULTANT

CERTIFICATIONS

Certified Industrial Hygienist (Chemical): American Board of Industrial Hygiene
Certified Safety Professional: Board of Certified Safety Professionals
Certified Hazardous Materials Manager: Institute of Hazardous Materials Management
Certified Indoor Air Quality Professional: Association of Energy Engineers
Certified Environmental Inspector: Environmental Assessment Association
Certified Environmental Specialist: Environmental Assessment Association
Asbestos Hazard Emergency Response Act (AHERA) Inspector: United States EPA
Asbestos Hazard Emergency Response Act (AHERA) Management Planner: United States EPA

EDUCATION

Rowan (Glassboro) University: B.A., Biology, 1979; Environmental Science Concentration.
Fairleigh Dickinson University: Graduate Courses in Chemistry

REPRESENTATIVE EXPERIENCE

Mr. Mulrooney is an expert consultant in the environmental, health, safety and industrial hygiene fields. He has more than 20 years experience with quality control, sampling, laboratory analysis, regulatory affairs, health and safety issues, industrial hygiene projects, multimedia environmental planning, and permitting. He works on projects throughout the U. S..

As part of the current business, Mr. Mulrooney has reviewed hundreds of technical analytical reports including data validation of "Tier I" reports for parameters including dioxins, furans, PCBs, semi-volatile and volatile organics, metals and other inorganic parameters in air, soil, water and wastes.

Most recently, Mr. Mulrooney has been the Environmental, Health and Safety Manager for Lockheed Martin Corporation's Research, Engineering and Analytical Contract for the United States Environmental Protection Agency's (EPA) Environmental Response Team (ERT). This contract supports all work conducted by the Environmental Response Team including laboratory work; air, water, soil, waste and biological sampling; geology; meteorology; engineering; underwater diving; working in areas with unexploded ordinances and working in areas of known biological agent (anthrax) presence. As a senior manager Mr. Mulrooney routinely reviewed analytical data to ensure the accuracy of the data and the risk the material has to the staff and the

public.

Mr. Mulrooney has been the Director of Environmental Health and Safety for ALLSTATE POWER-VAC reporting directly to the Chief Executive Officer. This $30 MM Company engages in a wide variety of work including environmental; tank cleaning; sewer inspections and restoration; and hazardous materials transportation. He has been responsible for reviewing analytical data relating to operations, developing and implementing corporate safety policies and dealing with all major industrial hygiene and safety issues for several facilities.

Prior to joining ALLSTATE POWER-VAC Mr. Mulrooney worked for Applegate Associates, a construction safety and environmental company. He managed all environmental and industrial hygiene projects for Applegate Associates. He reviewed analytical environmental data, wrote site specific Health and Safety Plans; safety manuals; conducted safety surveys; performed and reviewed safety inspections and audits; and developed and performed safety training on a number of safety topics.

Prior to joining Applegate Associates, Mr. Mulrooney worked for Recon Systems, an environmental consulting testing and engineering firm, now known as Levine-Fricke-Recon. He was a corporate officer responsible for the laboratory and industrial hygiene departments. He managed and performed complex multi-disciplined environmental projects. These often involved stack gas, ambient and indoor air; including HVAC systems, site assessment, asbestos and lead management and personal monitoring. He conducted data validation and was in responsible charge of a department that conducted data validation on a number of organic and inorganic parameters including dioxins and furans. He also performed gas, water, soil and hazardous materials sampling and analysis.

Mr. Mulrooney successfully used his knowledge of regulations under UST, NJ-ISRA, CWA, SDWA, CAA, RCRA, TSCA, CERCLA and OSHA for permit preparation and review; remediation; agency negotiations; analytical and toxicological data validation and review; and expert recommendations on wide array of environmental projects.

During his tenure at Recon, Mr. Mulrooney made major contributions to the company. These included start up and development of Recon's Continuous Emission Monitoring (CEM) air sampling and analysis capabilities and design of new and modification of existing equipment and methodologies to sample and analyze unique parameters in air and stack gas. He directed the upgrade and operation of Recon's laboratory. He also made formal presentations on topics including safety, industrial hygiene, environmental sampling and analysis. He has been a corporate chemical hygiene and radiation safety officer and was one of the principals responsible for maintaining overall data quality control and safety for the corporation.

Earlier in his career Mr. Mulrooney was involved in field and laboratory testing of stack gas, air, soil, water, hazardous waste and other material. Analysis of a wide array of solids, liquids and

gasses was accomplished using gas chromatography/ mass spectrometry (GC/MS), gas chromatography (GC), high pressure liquid chromatography (HPLC); atomic absorption (AA), infrared (IR), ultraviolet/visible (UV/Vis) spectrophotometry and many other instrumental and classical wet chemistry techniques to determine organic and inorganic parameters. Methodologies employed include EPA, ASTM, NIOSH, OSHA, state and other methodologies. He was also involved in other specialized engineering projects and petroleum product analyses and research.

At Trace Technologies Inc., an environmental consulting firm, Mr. Mulrooney was the laboratory and sales manager. He was responsible for marketing and managing engineering, sampling and analytical projects. He developed new methodologies for air and water field sampling.

Previously, Mr. Mulrooney worked at Penick Corporation, a chemical, pharmaceutical and food additives manufacturer. He analyzed a large variety of pharmaceuticals, flavorings, botanicals, surfactants, and pesticides using USP, NF, and FDA procedures. Instrumentation used included IR, UV, HPLC, GC and nuclear magnetic resonance (NMR).

PROFESSIONAL ACTIVITIES

Member, American Chemical Society
including the Environmental Chemistry and Chemical Health and Safety Divisions
Member, American Society for Testing and Materials
including the Committee on Sampling and Analysis of Atmospheres
Member, American Industrial Hygiene Association
including President and Secretary for the New Jersey Chapter
Member, American Academy of Industrial Hygiene
Member, Academy of Certified Hazardous Materials Managers
Member, American Society of Safety Engineers
including the New Jersey Chapter
Member, Environmental Assessment Association
Training includes the OSHA hazardous waste site safety training (40 hour and annual refreshers). Advanced courses were taken in gas and liquid chromatography; mass spectrometry and graphite furnace atomic absorption spectroscopy, laboratory safety; biological safety in the laboratory; weapons of mass destruction; unexploded ordinances; diving in contaminated waters; industrial hygiene, health and safety including site assessment; ventilation; hazardous materials management; indoor air evaluations; ambient, source and indoor air sampling; asbestos (with periodic refreshers from this year on); engineering; construction safety; computers; business and marketing. Also Standard First Aid and Cardiopulmonary Resuscitation (with periodic refreshers from this year on) coursework has been completed.

ENVISION
ENVIRONMENTAL, INC.

ATTACHMENT 2

Dust Monitoring Protocol – TAGM 4031

TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM #4031

FUGITIVE DUST SUPPRESSION AND PARTICULATE MONITORING PROGRAM AT INACTIVE HAZARDOUS WASTE SITES

TO: Regional Hazardous Waste Remediation Engrs., Bur. Directors & Section Chiefs

FROM: Michael J. O'Toole, Jr., Director, Division of Hazardous Waste Remediation

SUBJECT: DIVISION TECHNICAL AND ADMINISTRATIVE GUIDANCE MEMORANDUM -- FUGITIVE DUST SUPRESSION AND PARTICULATE MONITORING PROGRAM AT INACTIVE HAZARDOUS WASTE SITES

DATE: Oct 27, 1989

Michael J. O'Toole, Jr. (signed)

1. Introduction

Fugitive dust suppression, particulate monitoring, and subsequent action levels for such must be used and applied consistently during remedial activities at hazardous waste sites. This guidance provides a basis for developing and implementing a fugitive dust suppression and particulate monitoring program as an element of a hazardous waste site's health and safety program.

2. Background

Fugitive dust is particulate matter--a generic term for a broad class of chemically and physically diverse substances that exist as discrete particles, liquid droplets or solids, over a wide range of sizes--which becomes airborne and contributes to air quality as a nuisance and threat to human health and the environment.

On July 1, 1987, the United States Environmental Protection Agency (USEPA) revised the ambient air quality standard for particulates so as to reflect direct impact on human health by setting the standard for particulate matter less than ten microns in diameter (PM_{10}); this involves fugitive dust whether contaminated or not. Based upon an examination of air quality composition, respiratory tract deposition, and health effects, PM_{10} is considered conservative for the primary standard--that requisite to protect public health with an adequate margin of safety. The primary standards are 150 ug/m^3 over a 24-hour averaging time and 50 ug/m^3 over an annual averaging time. Both of these standards are to be

averaged arithmetically.

There exists real-time monitoring equipment available to measure PM_{10} and capable of integrating over a period of six seconds to ten hours. Combined with an adequate fugitive dust suppression program, such equipment will aid in preventing the off-site migration of contaminated soil. It will also protect both on-site personnel from exposure to high levels of dust and the public around the site from any exposure to any dust. While specifically intended for the protection of on-site personnel as well as the public, this program is not meant to replace long-term monitoring which may be required given the contaminants inherent to the site and its air quality.

3. Guidance

A program for suppressing fugitive dust and monitoring particulate matter at hazardous waste sites can be developed without placing an undue burden on remedial activities while still being protective of health and environment. Since the responsibility for implementing this program ultimately will fall on the party performing the work, these procedures must be incorporated into appropriate work plans. The following fugitive dust suppression and particulate monitoring program will be employed at hazardous waste sites during construction and other activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Such activities shall also include the excavation, grading, or placement of clean fill, and control measures therefore should be considered.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM_{10}) with the following minimum performance standards:

   Object to be measured: Dust, Mists, Aerosols
   Size range: <0.1 to 10 microns
   Sensitivity: 0.001 mg/m^3
   Range: 0.001 to 10 mg/m^3
   Overall Accuracy: ±10% as compared to gravimetric analysis of stearic acid or reference dust

   Operating Conditions:
   Temperature: 0 to 40°C
   Humidity: 10 to 99% Relative Humidity

   Power: Battery operated with a minimum capacity of eight hours continuous operation

   Automatic alarms are suggested.

Particulate levels will be monitored immediately downwind at the working site and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task; the P-5 Digital Dust Indicator as manufactured by MDA Scientific, Inc. or similar is appropriate.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the entity operating the equipment to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m^3 over the integrated period not to exceed 15 minutes. While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m^3, the upwind background level must be measured immediately using the same portable monitor. If the working site particulate measurement is greater than 100 ug/m^3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see Paragraph 7). Should the action level of 150 ug/m^3 be exceeded, the Division of Air Resources must be notified in writing within five working days; the notification shall include a description of the control measures implemented to prevent further exceedences.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM_{10} at or above the action level. Since this situation has the potential to migrate contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

    1. Applying water on haul roads.
    2. Wetting equipment and excavation faces.
    3. Spraying water on buckets during excavation and dumping.
    4. Hauling materials in properly tarped or watertight containers.
    5. Restricting vehicle speeds to 10 mph.
    6. Covering excavated areas and material after excavation activity ceases.
    7. Reducing the excavation size and/or number of excavations.

Experience has shown that utilizing the above-mentioned dust suppression techniques, within reason as not to create excess water which would result in unacceptable wet conditions, the chance of exceeding the 150 ug/m^3 action level at hazardous waste site remediations is remote. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. If the dust suppression techniques being utilized at the site do not lower particulates to an acceptable level (that is, below 150 ug/m^3 and no visible dust), work must be suspended until appropriate corrective measures are approved to remedy the situation. Also, the evaluation of weather conditions will be necessary for proper fugitive dust control--when extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended.

There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require appropriate toxics monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

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ATTACHMENT 3

NYSDOH Community Air Monitoring Plan for Intrusive Activities

Community Air Monitoring Plan

(Intrusive Activities)

Real-time air monitoring, for volatile compounds and particulate levels at the perimeter of the work area is necessary. The plan must include the following:

- Volatile organic compounds must be monitored at the downwind perimeter of the work area on a **continuous** basis. If total organic vapor levels exceed 5 ppm above background, work activities must be halted and monitoring continued under the provisions of a Vapor Emission Response Plan. All readings must be recorded and be available for State (DEC & DOH) personnel to review.

- Particulates should be continuously monitored upwind, downwind and within the work area at temporary particulate monitoring stations. If the downwind particulate level is 100 $\mu g/m^3$ greater than the upwind particulate level, then dust suppression techniques must be employed. All readings must be recorded and be available for State (DEC & DOH) personnel to review.

Vapor Emission Response Plan

If the ambient air concentration of organic vapors exceeds 5 ppm above background at the perimeter of the work area, activities will be halted and monitoring continued. If the organic vapor level decreases below 5 ppm above background, work activities can resume. If the organic vapor levels are greater than 5 ppm over background but less than 25 ppm over background at the perimeter of the work area, activities can resume provided:

- the organic vapor level 200 feet downwind of the work area or half the distance to the nearest residential or commercial structure, whichever is less, is below 5 ppm over background.

If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown. When work shutdown occurs, downwind air monitoring as directed by the Safety Officer will be implemented to ensure that vapor emission does not impact the nearest residential or commercial structure at levels exceeding those specified in the Major Vapor Emission section.

Major Vapor Emission

If any organic levels greater than 5 ppm over background are identified 200 feet downwind from the work area or half the distance to the nearest residential or commercial property, whichever is less, all work activities must be halted.

If, following the cessation of the work activities, or as the result of an emergency, organic levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the work area, then the air quality must be monitored within 20 feet of the perimeter of the nearest residential or commercial structure (20 Foot Zone).

If efforts to abate the emission source are unsuccessful and if the following levels persist for more than 30 minutes in the 20 Foot Zone, then the Major Vapor Emission Response Plan shall automatically be placed into effect;

- if organic vapor levels are approaching 5 ppm above background.

However, the Major Vapor Emission Response Plan shall be immediately placed into effect if organic vapor levels are greater than 10 ppm above background.

Major Vapor Emission Response Plan:

Upon activation, the following activities will be undertaken:

1. All Emergency Response Contacts as listed in the Health and Safety Plan of the Work Plan will be notified.

2. The local police authorities will immediately be contacted by the Safety Officer and advised of the situation.

3. Frequent air monitoring will be conducted at 30 minutes intervals within the 20 Foot Zone. If two successive readings below action levels are measured, air monitoring may be halted or modified by the Safety Officer.

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