FORM # 3
FORM FOR REQUESTING AN APPEAL HEARING
BEFORE THE NEVADA STATE ENVIRONMENTAL COMMISSION

1. Name, address, telephone number, and signature of applicant:
   Name: ROBERT E. DOLAN
   Address: 311 S. BRIDGE ST., SUITE E, WINNEMUCCA, NV 89445
   Telephone: 775-625-3200
   Signature: [signature]
   Representative Capacity (if applicable): N/A
2. Specify type of applicant: Individual, Partnership, Corporation, or Other: INDIVIDUAL
3. Other person or persons authorized to receive service of notice: TAMMY BENDELL
4. Complete description of the business or activity and the location of the activity involved in the request: CLASS I AIR QUALITY PERMIT AWARDED TO JUNGO LAND & INVESTMENT, INC. - PERMIT # AP4953-2525. PERMITTEE SEEKS TO OPERATE A MUNICIPAL SOLID WASTE LANDFILL AT JUNGO RD, 25 MILES WEST OF WINNEMUCCA, NEVADA.
5. Nature of the appeal and grounds thereof: APPEAL AWARD OF ABOVE REFERENCED PERMIT. 1) VIOLATION OF STATE POLICY, NRS 445B.100; 2) MADE UPON UNLAWFUL PROCEDURE; 3) AFFECTED BY ERROR OF LAW; 4) CLEARLY ERRONEOUS IN VIEW OF RELIABLE PROBATIVE & SUBSTANTIAL EVIDENCE ON THE WHOLE RECORD; 5) ARBITRARY, CAPRICIOUS & ABUSE OF DISCRETION; 6) VIOLATES CONSTITUTIONAL OR STATUTORY PROVISIONS
6. Section or sections of the State Air Quality Regulations, Water Pollution Control Regulations, Hazardous Waste Regulations, Solid Waste Management Regulations, or NRS section involved in the appeal: NRS CHAPTER 445B; NAC CHAPTER 445B
7. Approximate time in hours and minutes necessary for delivery of oral testimony and reading of prepared statements as admissible evidence to be entered in the record: 3 HRS

Date of Request 3/15/10

Send Form To: John B. Walker, State Environmental Commission, 901 South Stewart Street, Suite 4001 Carson City, NV 89701-5249

SUPPLEMENT TO FORM 3

QUESTION 5: NATURE OF THE APPEAL (AND GROUNDS THEREOF):

A) In violation of constitutional or statutory provisions: To wit: NRS 445B.100; NRS 445B. 145; NRS 445B.155; NRS 445B.310 (1) (a); NRS 445B.470 (3); NAC 445B.310 (1)(a); NAC 445B.3365;

B) In excess of the statutory authority of the agency:

C) Made upon unlawful procedure

D) Affected by error of law

E) Clearly erroneous in view of the reliable, probative and substantial evidence on the whole record

F) Arbitrary, or capricious or characterized by abuse of discretion

NRS 445B.100 Declaration of public policy.

1. It is the public policy of the State of Nevada and the purpose of NRS 445B.100 to 445B.640, inclusive, to achieve and maintain levels of air quality which will protect human health and safety, prevent injury to plant and animal life, prevent damage to property, and preserve visibility and scenic, esthetic and historic values of the State.

2. It is the intent of NRS 445B.100 to 445B.640, inclusive, to:

(a) Require the use of reasonably available methods to prevent, reduce or control air pollution throughout the State of Nevada;

(b) Maintain cooperative programs between the State and its local governments; and

(c) Facilitate cooperation across jurisdictional lines in dealing with problems of air pollution not confined within a single jurisdiction.

3. The quality of air is declared to be affected with the public interest, and NRS 445B.100 to 445B.640, inclusive, are enacted in the exercise of the police power of this State to protect the health, peace, safety and general welfare of its people.

4. It is also the public policy of this State:

(a) To provide for the integration of all programs for the prevention of accidents in this State involving chemicals, including, without limitation, accidents involving hazardous air pollutants, highly hazardous chemicals, highly hazardous substances and extremely hazardous substances; and

(b) Periodically to retire a portion of the emission credits or allocations specified in NRS 445B.235 that may otherwise be available for banking or for sale pursuant to that section.

1) The Bureau of Air Pollution Control (BAPC) failed in many ways to act consistent with the declared public policy of the State of Nevada as stated in NRS 445B.100. The BAPC admits that it did no modeling to determine the quantity of fugitive dust and/or particulate matter that could be emitted from the landfill site, and it did not require Jungo Land &

Investment, Inc. (sometimes referred to herein as "Jungo" or "Permittee") to provide any modeling on this point. Response to Comments, Question 2, 16, & 18.

Nor was the "dust control plan" proposed by Jungo (dated either April 1, 2009 or January 8, 2009), and accepted by BAPC the "best practical method" to control fugitive dust, and/or particulate matter, and/or odors. How could BAPC reasonably know what the best plan would or could be to control fugitive dust without knowing the amount, quantity or quality of emissions of particulate matter and/or fugitive dust there will or could be at the "area source" without modeling, and/or without establishing a baseline of the aforesaid emissions before operation of the landfill site? The fact is that you can't, and the decision of BAPC and presumed exercise of judgment of and by BAPC that it properly exercised its police power to protect the health, peace, safety and general welfare of the people of the State of Nevada is clearly erroneous in view of reliable, probative and substantial evidence, and is also arbitrary and capricious.

2) From available records (Exhibit "A") in the Jungo file, used by BAPC, reflect that the "best practical method" offered by Jungo which was accepted by BAPC **excludes** the following commonly accepted industry procedures or practices:

A) pre-watering of areas to be disturbed (including all unpaved onsite roads and staging areas);
B) graveling of roadways, storage areas and staging areas;
C) use of wind fences to reduce wind impacts;
D) cessation of all operations when winds make fugitive dust control difficult;
E) application of water sprays on material storage piles on a regular basis;
F) covering material storage piles with tarpaulin or geo-textiles;
G) tenting;
H) use of overhead water spray or water hoses to water down uncovered trucks transporting processed materials prior to leaving project boundaries;
I) track out controls such as graveled entrance and exit areas or other such controls;
J) informing subcontractors of their responsibility for control of fugitive dust while they are on the project site;
K) advising said subcontractors of the best practical method for controlling their fugitive dust as well as keeping off adjacent areas not covered by the project's permit;
L) training of construction equipment operators to recognize fugitive dust generation and having the authority to shut down operation until a water truck arrives and sprays on the disturbed area, equipment operator and/or responsible official has read and understands the requirements in the projects surface are disturbance permit and plan.

3) Examples of Best Available Control Methods (**BACM**) that were not required by BAPC to control fugitive dust and/or particulate matter by Jungo include the following:

A) re-vegetation or by replacing natural crusts with artificial covers.
B) Taking into account the length of time the soil remains exposed to hazards of wind and the timing of the disturbance on the need for a particular BACM.
C) Considering all these factors, it is possible to develop best management practices for specific land uses.
D) Restoring a vegetative cover or using organic mulch;

E) Chemical dust suppressants and soil stabilizers can be useful in reducing the tendency of fine-grained and loose soils to produce large amounts of windblown dust. They bind fine soil particles into larger particles that are less easily blown into the air; they retain moisture so that soils become more coherent; and they can form crusts that mimic the wind resistance of natural soil crusts.

F) Water-soluble surfactants are often added to water to increase the wetting power by breaking down the initial resistance of dry soils to water. Surfactants are relatively inexpensive and greatly decrease the amount of water necessary during dust control operations.

G) Chemical dust suppressants are often added to water, which act to disperse the chemicals, and then evaporates after application. The chemicals that are left behind coat the particle surfaces and bind the soil particles together.

H) The use of soil stabilizers. Soil stabilizers such as straw mulches increase the organic content of sandy, dry soils. They provide soil structure and the organic materials bind with clay and sand to reduce erosion; they also increase the ability of soils to retain moisture. Some types of mulch require tilling to integrate them into the upper layer of soil, if they are to be effective in dust control.

I) For trucks and/or rail cars hauling waste materials to or from the site, fully cover and secure cargo loads and prevent leakage.

J) Install windbreaks around the disturbed area

The failure of the BAPC to require the use of the above referenced dust control techniques referenced in 2 and 3 herein are clearly erroneous, and represent an arbitrary or capricious decision and/or are an abuse of discretion, and violate state policy and state law.

4) Moreover, the approved method by BAPC for dust control simply uses the expression: "use of water trucks to spray water on disturbed areas on a regular basis". But no definition is given on the type, or quality of the water truck, to be used; or, what amount of water is to be used? Or, what "regular basis means". Is once a month on the 3rd day of every month regular? Or, is once a week on Tuesday regular? Or, does regular mean ten times a day? Or, does regular mean within one hour of the deposit of solid waste? Or, does regular mean within one hour of a wind episode when the wind exceeds 30 mph? Or, 50 mph? It's hard to tell.

Furthermore, what constitutes a "disturbed area"?

In the permit reference is made to the "Maximum Opacity of Emissions" as being "equal to or greater than 20 percent" and "determined by a visual measurement". By whom? When? If it is at night time then visibility may be very limited. Yet as seen in point 9 below, the BAPC has determined in advance that "the wind is not picking up fugitive dust from the controlled site; and any fugitive dust in the air at the controlled site is from the surrounding landscape". In light of the regulatory scheme, the general ridiculousness of these requirements continues to amaze, and reflects an arbitrary and capricious and/or an abuse of discretion review by the BAPC.

No notice is provided to Jungo of when the "regular" application of water is to be applied, or what standard of behavior is given to Jungo to comply with this subjective determination of what or when the maximum opacity level of emissions are present. In short, it is an overly vague condition. Accordingly, there is no way of actually monitoring any compliance by Jungo to this ostensible condition by BAPC.

5) And, just as importantly, the Substantive Due Process Clause of the Fourteenth Amendment requires that before a State agency can penalize a person or company, like Jungo, for improper or illegal behavior, that clear and unambiguous advance notice be provided to them of what constitutes offending behavior. Here, given the lack of proper standards and definitions by BAPC to Jungo about was constitutes a "disturbed area" or what "regular basis" means, or even how to determine that emissions are coming from a disturbed area then the Substantive Due Process requirements are lacking. Accordingly, the entire regulatory scheme on this point violates U.S. Constitutional provisions, State Policy and common sense to the extent that the decision of BAPC is arbitrary, capricious and otherwise an abuse of discretion..

6) As a result, the BAPC has again violated State policy, and not required that "Best Practical Method" be used to control fugitive dust and/or particulate matter, and as such BAPC abused its discretion, and was arbitrary and/or capricious. The arbitrary and capricious nature of BAPC's acceptance of the "dust control plan" is even more evident by its admission to response 12 that "BAPC **does not** conduct siting evaluations".

7) Meanwhile, BAPC does not require or set a condition that monitoring equipment be used in and around the landfill site to determine the quantity of emissions of fugitive dust and/or particulate matter.

8) So, relative to fugitive dust and/or particulate matter the BAPC does not A) conduct a site evaluation, B) do modeling, C) provide standards to be used to evaluate compliance with the offered dust control plan, and D) set a condition for the operating permit that monitoring equipment be used to measure the emissions from the landfill site. And the BAPC believes that it has done its job of protecting the public's health, safety and welfare! This is the same see nothing, do nothing, understand nothing, bureaucratic mentality used by the Securities and Exchange Commission in regulating Bernie Madoff so as to protect the investing public! And it amounts to a shameful display.

9) Meanwhile the response by BAPC to question 22 borders on lunacy: BAPC states that "(i)t can be clear from these inspections that the wind is not picking up fugitive dust from the controlled site; and any fugitive dust in the air at the controlled site is from the surrounding landscape". Inspection by whom? When? The uncontroverted fact is that fugitive dust at landfill sites is emitted from the wind erosion from disturbed areas and from storage piles. The finding by BAPC was both explicitly and implicitly clearly erroneous.

10) In its response the BAPC states that the "BAPC is not required to install instrumentation around the site for emissions of NMOC, because **"(t)hese types of emissions do not lend themselves to ambient monitoring"**. See response 31. This is a blatant falsehood. Indeed there are many commercial products that monitor particulate matter. See, for example, the PM2.5 "Fine Particulate sampler APM550". (A copy of the marketing piece for said product is attached hereto as exhibit "B). Also, see the "PM 10 Monitoring at the Berkley Recycling Center Materials Recovery Facility", eight page report wherein ambient air was monitored for emission of particulate matter. (Exhibit "C"). And see, the first page of the "Fugitive Dust Modeling with AERMOD for PM10 Emissions from a Municipal Waste Landfill" (exhibit "D"). And, one more time, see the three page report "C-NMOC-Continuous Non-Methane Organic Carbon Analyzer for Real Time Air Monitoring" (Exhibit "E"). But then, the BAPC states that it "does not conduct siting evaluations", but claims authority to evaluate (without modeling?) and states that the "BAPC only evaluates air quality impacts based on the site specific in the air quality operating permit application..." Response 12. This is madness, and, of course, arbitrary and capricious and an abuse of discretion.

Furthermore the Clean Air Act (42 USC § 1857) as amended, PART 53—AMBIENT AIR MONITORING REFERENCE AND EQUIVALENT METHODS
Subpart A—General Provisions

§ 53.1 Definitions. define the samplers to measure Particulate emissions as follows:

PM 2.5 *sampler* means a device, associated with a manual method for measuring $PM_{2.5}$, designed to collect $PM_{2.5}$ from an ambient air sample, but lacking the ability to automatically analyze or measure the collected sample to determine the mass concentrations of $PM_{2.5}$ in the sampled air.

PM 10 *sampler* means a device, associated with a manual method for measuring PM_{10}, designed to collect PM_{10} from an ambient air sample, but lacking the ability to automatically analyze or measure the collected sample to determine the mass concentrations of PM_{10} in the sampled air.

PM 10C *sampler* means a PM_{10} sampler that meets the special requirements for a PM_{10C} sampler that is part of a $PM_{10-2.5}$ reference method sampler, as specified in appendix O to part 50 of this chapter, or a PM_{10} sampler that is part of a $PM_{10-2.5}$ sampler that has been designated as an equivalent method for $PM_{10-2.5}$.

PM 10−2.5 *sampler* means a sampler, or a collocated pair of samplers, associated with a manual method for measuring $PM_{10-2.5}$ and designed to collect either $PM_{10-2.5}$ directly or PM_{10C} and $PM_{2.5}$ separately and simultaneously from concurrent ambient air samples, but lacking the ability to automatically analyze or measure the collected sample(s) to determine the mass concentrations of $PM_{10-2.5}$ in the sampled air.

Sequential samples for PM samplers means two or more PM samples for sequential (but not necessarily contiguous) time periods that are collected automatically by the same sampler without the need for intervening operator service.

Yet there is human health risks for the inhalation of particulate matter and noncarcinogens. Indeed there is a method to estimate the Hazard Quotient to the public as follows:

Noncarcinogens
Human health risk estimates for inhalation of noncarcinogens are based on the following calculation:
Hazard Quotient = C/RfC
where:

C = maximum ambient air concentration, $\mu g/m^3$

RfC = pollutant-specific reference concentration, $\mu g/m^3$

The averaging time for noncarcinogen concentrations can be either annual, or a specific number of hours, depending on the basis of the reference dose (see the list of "Reference Concentrations for Short-Term Inhalation Exposure" available at www.nj.gov//dep/aqpp/risk.html).

It is more than clear that there are proper machines, techniques and methods that can monitor, measure and quantify particulate emissions from landfills, and the BAPC decision was affected by a misunderstanding and/or misapplication of law, and is otherwise arbitrary and capricious or was an abuse of discretion, or otherwise clearly erroneous when it determined not to use or rely upon said processes.

11) The BAPC acted in violation of NAC 445B.310 (1)(a) when it failed to adequately determine the Potential to Emit ("PTE"). Although an ambient standard no longer exists for PM, its total PTE is still used by the BAPC to determine whether an environmental evaluation will be required for a pending permit action. In general, PM10, SO2, NOX, and CO emissions should be modeled in all cases if there is a PTE for these pollutants. It appears that this was not done by the BAPC in this case, nor was it effectively considered in granting the air quality permit.

12) The failure of Jungo to truthfully answer the following question in connection with its CUP application appears to be a meaningless point to the BAPC. See response number 82.9. Said question was as follows: Question 6: Will the use affect abutting properties or the uses permitted thereon? Describe: Answer: "No effect on abutting properties." (See exhibit "F"). The BAPC perhaps correctly effectively states that NRS 445B.470 does not apply to material misstatements of fact by permittee in forums other than before the BAPC. But, nowhere in the law is the BAPC required to completely blind itself from an obviously false factual assertion by Jungo as it determines if the various other representations it made to the BAPC are credible in connection with its application for the operating permit. The failure of BAPC to determine if Jungo made a material misrepresentation of fact in connection with the CUP was arbitrary and capricious, and was an abuse of discretion, and to the extent the BAPC operated under the notion or belief that the law required it to completely blind itself to the allegation that Jungo had provided materially false information in connection with its project and CUP application was an error of law which affected the decision to grant the permit herein.

13) The lack of specificity by Jungo in its application, (as reflected below, By Jungo and apparently accepted by BAPC in its permitting process about the quantity of various kinds and types of solid waste to be deposited, or percentage of asbestos and/or the other solid waste materials to be deposited renders the LandGem statistically meaningless. Moreover, in light of the inability to know any with reasonable specificity as stated, the default parameters relied upon by Jungo and BAPC amounts to pure speculation, so such an extent that LandGem failed to adequately or accurately produce figures, statistics or probabilities concerning emissions that can be reasonably relied on by BAPC, and the reliance on same was arbitrary, capricious and amounted to an abuse of discretion.

Ultimately, and sadly, the aforementioned default parameters were guided by policy and not science, nor did they or could they comport with the stated goal and law of the State of Nevada of protecting the health and safety of the public.

RECOLOGY APPLICATION TO NDEP 2007

Waste Kind	Amount
Residential and Commercial Municipal Solid Waste	70% - 100%
Contaminated Soils (non-hazardous)	0% - 30%
Construction and Demolition Wastes	0% - 15%
Tires	0% - 60%
Wastewater Treatment Sludges	0% - 15%
Asbestos Containing Materials	0% - 15%

14) Meanwhile, the application is silent concerning the quantity, type, and procedure, if any, in connection with the acceptance of electronic waste.

15) Reference is made to response 83.3. There is no scientific reason why the mathematical probability of lightning strikes to the landfill site can't be incorporated in the modeling by BAPC to determine if the landfill meets or can meet the requirements under the Clean Air Act, and the failure to do so.

16) The BAPC is obligated to prepare the modeling analysis and environmental evaluation, the applicant must provide all required information so that the BAPC can perform its own independent modeling analysis. The required information includes, but is not limited to, the following; [a] proposed emission inventory of all regulated air pollutants including those from insignificant activities. This is taken from the Nevada Bureau of Air Pollution Control General Air Dispersion Modeling Guidelines September 2008 handbook and reflects that the BAPC violated their own policy in connection with the process and procedures they relied on or failed to rely on in granting the permit.

17) From review of the public record concerning this operating permit, it appears that additional and supplemental information and/or documents and/or plans were submitted to BAPC concerning the application for the air quality operating permit and said additional and supplemental information and/or documents and/or plans potentially were not provided in a timely fashion to the public for review and/or public commentary.

18) All of the above (1-16) in whole or in part constitutes a "procedural irregularity".

Robert E. Dolan

Robert Dolan

From: Jonathan McRae [jmcrae@ndep.nv.gov]
Sent: Monday, March 15, 2010 8:26 AM
To: 'bobdolanlaw@sbcglobal.net'
Subject: Dust Control Plan
Attachments: Dust Plan.pdf

Mr. Dolan:

Here is a copy of the dust control plan that was provided from Recology for their air permit application.

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
protecting the future for generations

Jonathan McRae
Bureau of Air Pollution Control
Nevada Division of Environmental Protection
901 S. Stewart St., Ste 4001
Carson City NV 89701
p: 775.687.9337 f: 775.687.6396
www.ndep.nv.gov

Bindertek #CLEX

Exhibit
"A"

ndep

SURFACE AREA DISTURBANCE PERMIT
FUGITIVE DUST CONTROL PLAN

I. COMPANY INFORMATION				
COMPANY NAME:	Jungo Land and Investments, Inc.	PERMIT NUMBER: AP	Pending	
BUSINESS ADDRESS:	Jungo Road	Winnemucca	Nevada	Humboldt
	(STREET)	(CITY/TOWN)	(STATE)	(COUNTY)
MAILING ADDRESS:	160 Pacific Ave., Suite 200	San Francisco	California	94111
	(STREET/P.O BOX)	(CITY/TOWN)	(STATE)	(ZIP CODE)
PHONE NUMBER:	415-875-1000	FAX NUMBER:	415-875-1154	

II. RESPONSIBLE OFFICIAL (R.O.)				
R.O. NAME	Michael J. Sangiacomo	TITLE	President & Chief Executive Officer	
BUSINESS ADDRESS:	160 Pacific Ave., Suite 200	San Francisco	California	94111
	(STREET)	(CITY/TOWN)	(STATE)	(COUNTY)
MAILING ADDRESS:	160 Pacific Ave., Suite 200	San Francisco	California	94111
	(STREET/P.O BOX)	(CITY/TOWN)	(STATE)	(ZIP CODE)
PHONE NUMBER:	415-875-1000	FAX NUMBER:	415-875-1154	

III. PHYSICAL PLANT				
PROJECT ADDRESS:	Jungo Road	Winnemucca	Nevada	Humboldt
	(STREET)	(CITY/TOWN)	(STATE)	(COUNTY)
MAILING ADDRESS:	160 Pacific Ave., Suite 200	San Francisco	California	94111
	(STREET/P.O BOX)	(CITY/TOWN)	(STATE)	(ZIP CODE)
PHONE NUMBER:	415-875-1000	FAX NUMBER:	415-875-1154	
MAJOR X- STREETS:	None			
SECTION: 7	TOWNSHIP: 35N	RANGE: 33E		
UTM:	4,318,248 m N, 379,550 m E (NAD 83)			
PROJECT MAPS: (MARK TYPE OF MAP ATTACHED)	☐ (TRACT)	☒ (SITE)	☐ (TOPOGRAPHIC)	☐ (OTHER -)

SURFACE AREA DISTURBANCE PERMIT
FUGITIVE DUST CONTROL PLAN

VI. FUGITIVE DUST CONTROL - BEST PRACTICAL METHODS

Best Practical Methods for controlling fugitive dust (Project Site): The best practical methods (BPMs) to be used for controlling fugitive dust generated at this Project's disturbed areas are as follows. This is not an all inclusive list, other BPMs may also be appropriate for this section (check appropriate BPMs):

- ☒ ***Use of water trucks to spray water on disturbed areas on a regular basis***
- ☐ Pre-watering of areas to be disturbed (including all unpaved onsite roads and staging areas)
- ☐ Graveling of roadways, storage areas and staging areas
- ☒ ***Posting and limiting vehicle speeds to 10-15 miles per hour***
- ☐ Use of wind fences to reduce wind impacts
- ☐ Cessation of all operations when winds make fugitive dust control difficult
- ☒ ***Fencing or berming to prevent unauthorized access to disturbed areas.***
- ☐ Application of water sprays on material storage piles on a regular basis
- ☐ Covering material storage piles with tarpaulin or geo-textiles; tenting
- ☐ Use of overhead water spray rack or water hoses to water down uncovered trucks transporting processed materials prior to leaving Project boundaries.
- ☐ Track-out controls
  - ☐ Graveled entrance and exit areas
  - ☐ Street Sweeping
  - ☐ Other
- ☐ Subcontractors: Any and all subcontractors (including truck drivers) informed of their responsibilities for the control of fugitive dust while they are on the project site (including haul roads to and from the site). In addition, they will be advised of the best practical methods for controlling their fugitive dust as well as keeping off adjacent areas not covered by the project's permit.
- ☐ Training of construction equipment operators to recognize fugitive dust generation and having the authority to shut down operations until water truck arrives and sprays water on the disturbed areas
- ☐ Equipment Operator and/or Responsible Official has read and understands the requirements in the Project's Surface Area Disturbance Permit and Plan
- ☐ Other Applicable BPM: ______________________
- ☐ Other Applicable BPM: ______________________
- ☐ Other Applicable BPM: ______________________

VII. PROJECT FUGITIVE DUST/EMISSIONS RESOURCES INFORMATION

Water Trucks: Water trucks may be owned or rented. In the event that one or more water truck(s) necessary for control of fugitive dust (owned, rented or leased) becomes inoperable, additional water truck(s) will be rented or leased for until such time the water truck(s) are operable. Operable water truck (s) must be available on 7-day/week, 24-hour/day basis.

Number of Water Trucks: 1

Water Truck # 1		**Capacity Gallons:**	tbd
Water Truck # 2		**Capacity Gallons:**	
Water Truck # 3		**Capacity Gallons:**	

Location of water supply for control of fugitive dust:

Water well located on Site Facilities Map, Appendix 7, and Water Storage Tank, location tbd.

VII. PROJECT FUGITIVE DUST/EMISSIONS RESOURCES INFORMATION (Continued)

Water Truck and Construction Equipment Operational Log: the daily operations log book for recording the operation of the water truck and construction equipment is maintained on the Project site. The log contains the following information:

- Hours of operation for each water truck and construction equipment (front loader, scraper, etc.) used onsite.
- The daily quantity of water used for fugitive dust control purposes.
- Starting and ending times for the workday.
- Record of water truck (including rental water truck) and construction equipment maintenance, malfunctions and repairs

VIII. NOTIFICATION

Excess Emissions: The following training requirements are <u>recommended</u> as an aid in maintaining compliance with permit terms and conditions and are not mandatory. It is recommended that the R.O. and/or selected equipment operators be given USEPA Method 9 visual emission training (or equivalent, as determined by NDEP) to recognize when the facility's permit's opacity limits are being exceeded and procedures to follow to bring systems back into compliance. It is recommended that all training records be kept with the facility's Process and Emission Control Equipment Operational Log.

IX. TRAINING

Training Requirements: The following training requirements are <u>recommended</u> as an aid in maintaining compliance with permit terms and conditions and are not mandatory. It is recommended that the R.O. and/or selected equipment operators be given USEPA Method 9 visual emission training (or equivalent, as determined by NDEP) to recognize when the facility's permit's opacity limits are being exceeded and procedures to follow to bring systems back into compliance. It is recommended that all training records be kept with the facility's Process and Emission Control Equipment Operational Log.

X. PLAN REVISION

Plan Revision Requirements: In the event there are changes in the operation of the Project, modifications made to the Project's Air Quality Operating Permit or changes to the Nevada Administrative Code affecting this plan, the plan shall be revised to reflect those changes and modifications and resubmitted to the Nevada Division of Environmental Protection for review and evaluation.

Plan Date:	January 8, 2009

SURFACE AREA DISTURBANCE PERMIT
FUGITIVE DUST CONTROL PLAN

IV. ACKNOWLEGEMENT OF ENVIRONMENTAL CONTROL REQUIREMENTS BY R.O.

I, Michael J. Sangiacomo (R.O. Name), the Responsible Official for Jungo Land & Investments, Inc. (Company Name), have: (1) read and understand the provisions of Nevada Administrative Code (NAC) Section 445B.22037 "Emissions of Particulate Matter: Fugitive Dust" which requires that we prevent controllable fugitive dust to become airborne on a 7-day/24-hour /day basis at our Project's site; and , (2) read and understand the terms and conditions of our Project's Nevada Division of Environmental Protection Bureau of Air Pollution Control Permit AP Pending (Permit Number).

Signed [signature] (R.O. Signature) Date 1/8/07

V. PROJECT OPERATIONS

Description of Project Operations: Construction and operation of a landfill.

Nevada Division of Environmental Protection - Bureau of Air Pollution Control
901 South Stewart Street, Suite 4001, Carson City, NV 89701
(775) 687-9350 FAX (775) 687-6396

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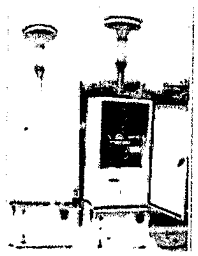
Fine Particulate Sampler APM550



PM2.5 SAMPLER

- Impactors as per USEPA design
- Same instrument can be used for monitoring PM10
- Brushless, oil-free pump requires no maintenance

New Products

Click here to get the Information About New Products launched by the company

Envirotech Instruments Pvt. Ltd. (EIPL) is a leading Indian manufacturer of Air Pollution Monitoring Instruments. Our product range includes PM10 and PM2.5 Samplers, Stack Sampling systems, High Volume Samplers, Weather Monitors, Organic Vapor Samplers and Personal Samplers.

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About Envirotech

Envirotech has a dominant share of the Indian market with hundreds of customers spread all over the country. Envirotech also exports Air Pollution Monitoring equipment to many countries of the region. **EIPL** now has Exclusive Distribution arrangements in India for

- Ecotech's extensive range of world class Air Quality Analyzers
- Synspec's automated products for monitoring a variety of Organic Pollutants.

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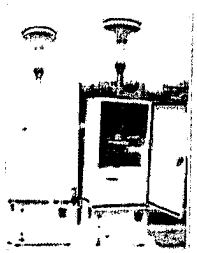

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PM 10 Monitoring at the Berkeley Recycling Center Materials Recovery Facility

PM 10 Monitoring at the Berkeley Recycling Center Materials Recovery Facility
July, 2002 to January, 2003
Prepared for: Community Conservation Centers
Prepared by: Eric D Weinegar, Ph.D.
Applied Measurement Science
Fair Oaks, California

April 15, 2003

1. INTRODUCTION

Due to concerns about its contribution of fugitive PM 10 emissions to nearby facilities and exposure of its employees to these emissions, the Community Conservation Center contracted with Applied Measurement Science to conduct PM 10 monitoring at the Berkeley Recycling Center at the corner of Gilman and 2' Street in Berkeley.

The monitoring was to be conducted in two phases, first at "upwind" and "downwind" locations, and secondly inside the sorting building. The upwind/downwind monitoring was intended to provide a measure of the contribution to local PM 10 concentrations by facility operations. The sorting building monitoring was intended to assess the potential for high exposure to employees working in the semi-enclosed building around the sorting and packaging operations.

2. TECHNICAL APPROACH

2.1 Study Design

The technical approach used was to collect concurrent hourly PM 10 data at upwind and downwind locations using beta attenuation monitor technology. Following that period, the inside location would be monitored. The intended test time period was to collect data for two months at the upwind and downwind locations, and the inside location for three weeks.

2.2 Site Location

The Berkeley Recycling Center is located at the corner of Gilman and 2nd Streets in Berkeley, California. Figure 1 shows the general area. This area is primarily industrial, with the city Transfer Station to the north, and to the south, the Pacific Foundry and Steel Mill. Gilman Street is a major artery for access to and from 1-80. Interstate Highway 80 is located approximately 150 yards to the west.

EXHIBIT
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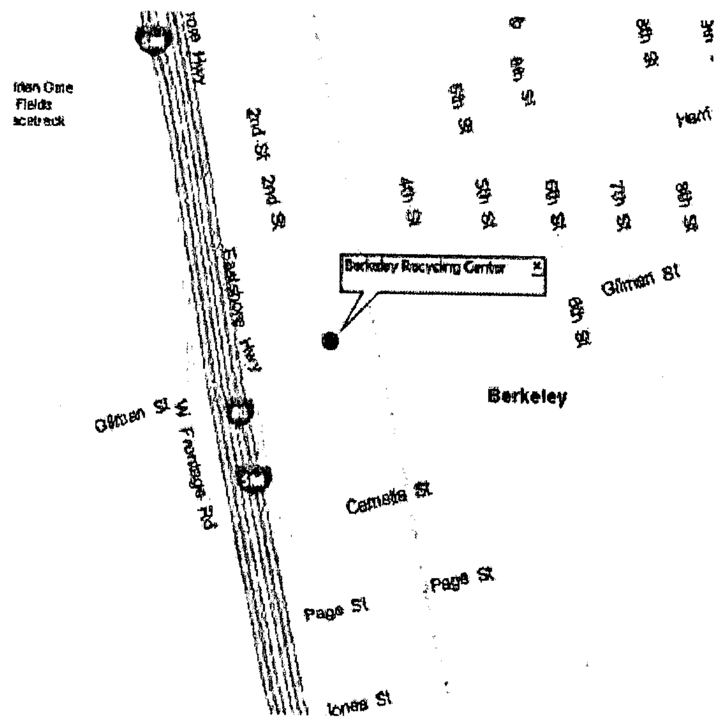

Figure 1. Site Location

The monitoring sites are noted in Figure 2. This figure was obtained from an aerial photo of the area.

The upwind site was located on top of a storage container on the southwest corner of the lot. The instrument inlet was at a height of approximately 12 feet above ground level. This location was designated as "upwind" due to the predominant wind direction as determined from the Harrison Field wind direction data.

The "downwind" site was located on top of a storage container along the north side of the lot, and was designated as such from the same Harrison Field wind data.

Figure 2. Monitoring Locations

2.3 Monitoring Equipment

The monitoring was conducted using a continuous PM 10 monitor, the MetOne, Inc. EBAM (Environmental Beta Attenuation Monitor). The EBAM is a portable version of the EPA- and California Air Resources Board-approved BAM 1020 continuous PM1O monitor. The EBAM is based on the attenuation of beta particles by particulate matter collected on a quartz fiber tape. The specific attenuation of the material collected on the tape is proportional to its mass.

The flow of the monitor is controlled volumetrically via the external temperature sensor and atmospheric pressure. The appropriate calculation is performed to yield a 16.7 liters per minute flow rate that is specified for accurate size separation of the particulate matter through the PM 10 virtual impactor inlet.

This mass detected is divided by the volume of air collected during the hour period. Subsequently, the hourly values are averaged into 24- hour periods, which then can be combined into longer term averages.

Following the monitoring, one of the EBAMs was co-located with the BAM 1020 at Harrison Park for a cross-calibration test. The BAMs in this case would be considered the more accurate instrument, and having been recently calibrated and audited, were deemed accurate. The results of this comparison showed that the EBAM provided data with a bias of approximately 15% low.

Therefore, the concentrations for the EBAMs were adjusted by that amount. All data cited in this report reflects that calibration factor.

2.4 Upwind Monitoring

Upwind (concurrent with downwind) monitoring was conducted from late June, 2002 to mid December, 2002 at the top of the storage shed located at the southwest corner of the facility. The dominant wind direction of Southwest to Northeast was determined from PM 10 and meteorological monitoring that has been in operation since June, 2001 at nearby the City of Berkeley's Harrison Park play fields.

2.5 Downwind Monitoring

Downwind (concurrent with upwind) monitoring was conducted at the top of the storage shed located at the middle of the north fence line. This site was selected as the downwind location due to its position at the downwind side of the facility and due to the presence of the storage container to place the equipment. The height of the inlet was approximately 12 feet above ground surface.

2.6 Area Monitoring

Area monitoring was conducted for three weeks in the sorting building. The monitor was placed at the end of the sorting machine platform and run continuously during the period from December 18, 2002 to January 17, 2003. This placement was necessary due to it being the only spot that was not either occupied by material being processed or would be in the way for the forklifts, etc. However, due to its relatively protected indoor location, this site was judged to be adequate for being representative of area concentrations.

Hourly PM 10 data was collected in the same manner as the upwind and downwind monitoring.

2.7 Meteorological Data Collection

Local meteorological data from the Harrison Field air monitoring that was concurrently in operation during the CCC monitoring was used to establish the upwind/downwind wind pattern.

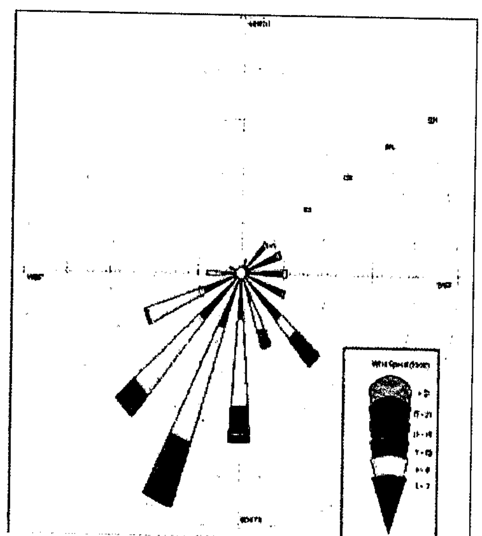

Figure 4. Wind Rose for Study Period: July to December, 2002.

This plot shows that the dominant pattern is for wind to come from the south to southwest direction, establishing the southwest monitoring location as upwind and the north location as downwind.

2.8 Monitoring Period

Monitoring was conducted at the upwind and downwind locations from July 1, 2002 to December 18, 2002. However, during that period, there were several instrument malfunctions due to pump failure. The EBAM is a relatively new instrument, and evidently some elements were not sufficiently tested. The sampling pump was replaced twice on each instrument, once being returned to the factory and once with an on-site replacement. The second pump was replaced by a new version that was promised to be more robust than the first type. This indeed turned out to be the case, as the final part of the monitoring period, data was collected without mishap.

In addition to the pump outages, there were several power problems related to the use of an extension cord that crossed a portion of the work area. When that cord was shifted to another building, those power outages stopped.

While the two sites were not contemporaneous for the entire study period, the number of days at each location plus the relatively constant wind directions suggests that the use of overall averages is valid. The examination of a subset of data that consisted of both monitors for more than 30 days mirrors the overall trends, thereby lending support to the overall method of combining data.

3. RESULTS

3.1 Upwind and Downwind PM1O Results

Hourly PM 10 concentration values show that the site produced sporadic spikes in concentrations of up to 0.350 mg/m3-a substantial hourly concentration. However, combined with the dominant lower values, the overall concentrations average to more reasonable values. As the discussion below notes in relation to diurnal patterns, the overall facility contribution to background PM1O is 0.005 mg/m3.

Figure 5 shows the upwind and downwind concentrations over the entire study period. The gaps in the data due to instrument difficulties are evident.

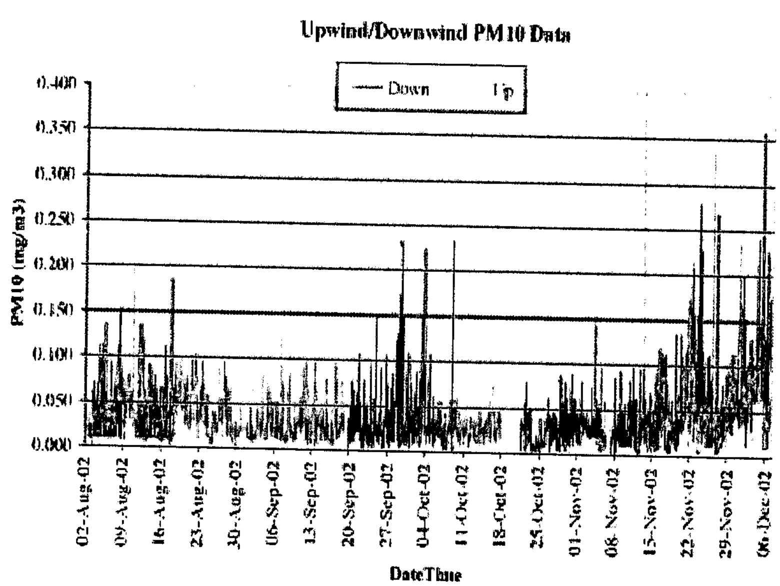

Figure 5. Upwind and Downwind Concentrations

Both upwind and downwind concentrations peaked at high values several times higher than the average, suggesting that facility operations were not the sole source for spikes. It is likely that the nearby industrial sites contributed sporadic high values, in addition to regular high values, as discussed below. In addition, mobile sources such as idling trucks nearby on 2nd street could directly impact the relatively small area bounded by the monitors.

Localized sources were certainly a cause for many of the spike values. There are several facility operations that potentially could cause short-term pulses of high dust concentrations. The specific correlation of activities with high concentrations cannot be made from this data set, but overall the activities do not appear to be major impact to the area concentrations.

Overall, the upwind concentrations were lower than the downwind concentrations by just a few micrograms per cubic meter. The data showed that the recycling center contributed just a few micrograms per cubic meter PM 10 at the downwind location. The average PM 10 concentration at the upwind site was 0.039 mg/m3 and at the downwind site was 0.044 mg/m3. During work hours (8AM to 5 PM), the concentrations were 0.037 mg/m3 at the upwind site, and 0.043 mg/m3 at the downwind site. During the off hours (non-work hours), the concentrations were 0.040 mg/m3 at the upwind site and 0.045 mg/m3 at the downwind site.

The diurnal pattern is useful to examine to determine hourly trends across the entire study period. Figure 6 shows the upwind and downwind concentrations on a hourly basis averaged over the entire study period.

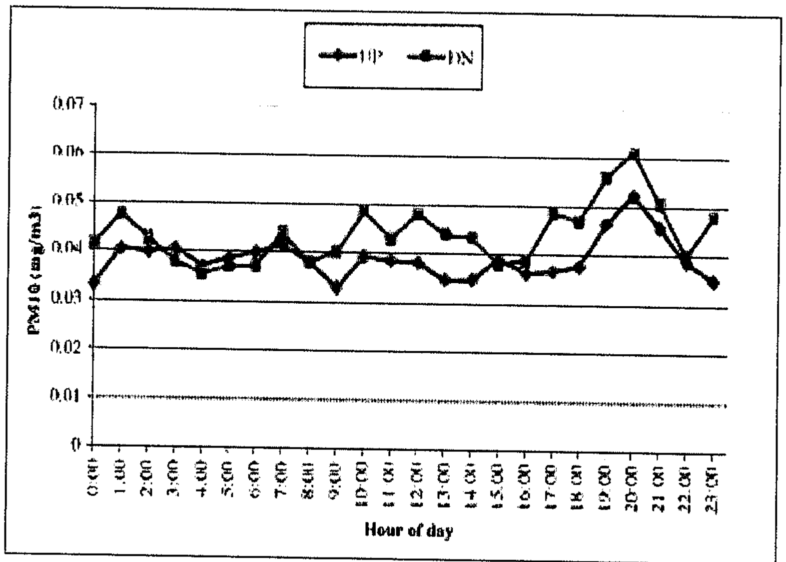

Figure 6. Diurnal Plot

Figure 6 shows hourly data are consistent with these averages. Midnight to 8 AM concentrations are fairly consistent between upwind and downwind, indicating no local sources. The divergence at midnight to I AM may be due to localized micrometeorological conditions that arise from calmer winds in the middle of the night.

A slight upward tick at 7 AM at both locations indicates morning rush hour traffic. This slight upward trend is only slightly indicated at the afternoon rush and only at the upwind location.

The daytime work hours of 8 AM to 5 PM values show that the downwind concentrations begin to increase around 8-9 AM, and then diminish briefly at the end of the day. The average difference between the upwind and downwind concentrations during the work day was 0.006 mg/m3. This amount-0.006 mg/m3-is the estimate of the contribution of the recycling center to the area PM 10 burden.

The downwind concentrations start to rise at around 5 PM and continue until a peak at 8 PM. At that time, both the upwind and downwind concentrations show a peak, although at different magnitudes.

This peak appears to be due to localized industrial activity. The fact that the downwind concentration is higher than upwind indicates an elevated source that impacts the upwind side less than the downwind. The plume appears to impact the upwind location less than the downwind location. This suggests that the emission point is elevated, that the plume is above ambient temperature, and therefore has some loft. The dispersion occurs normally in a Gaussian mode and therefore disperses over a distance. In the evening hours when the winds subside, the plume would be more distinctly formed and dispersion would occur over greater distances. Hence the conclusion that the plume originates at the foundry or steel mill and appears to impact the upwind and downwind locations in the noted manner.

Given the dominant wind direction, this peak must arise from some regular event at the foundry or steel mill. Attempts were made to ascertain what kind of regular schedule would correspond with this peak, but no definitive answers were obtained.

An examination of the weekday concentration trends shows some variation by day of the week, although only three days appear to be substantial-Sunday, Thursday, and Friday. Figure 7 shows these data.

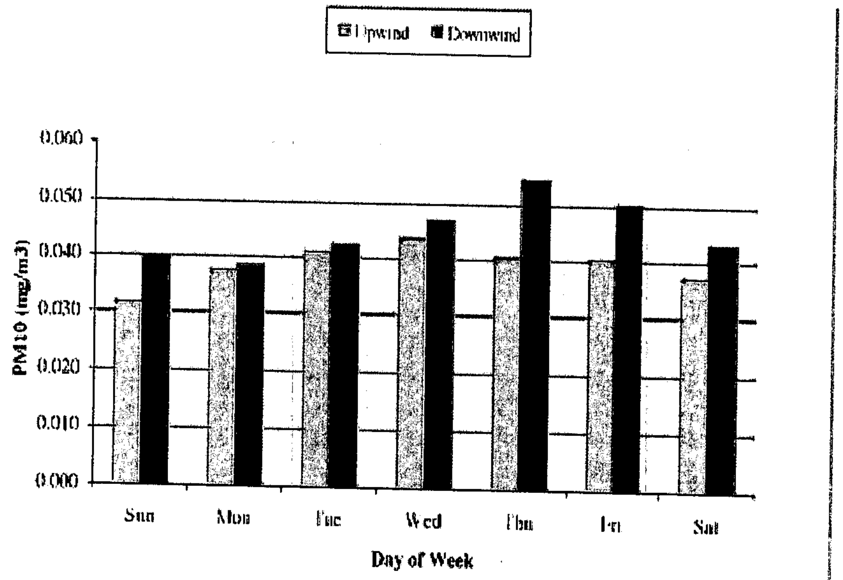

Figure 7. Day of Week Dependence

Overall, the facility operations do not cause an exceedance to any regulatory standards over the long-term since the average concentration is less than both the California and Federal ambient air standards. The California ambient air quality standard for PM 10 is 0.050 mg/m3 for 24 hours, and the Federal 24-hour standard is 0.150 mg/m3.

A total of 15 instances of the 24-hour California standard exceedances occurred at the upwind location, and a total of 20 at the downwind location occurred. One 24-hour period at the downwind site exceeded the Federal standard of 0.150 mg/m3.

The relatively high number of exceedances at the upwind site suggests that other upwind sources contributed to both those exceedances and the subsequent downwind exceedances. A daily examination of the exceedances does not shed much light on trends as there are both days with high upwind and low downwind, and vice-versa. The overall trend is more important, showing a minimal facility impact to the area concentrations.

Table I contains the 24- hour (midnight to midnight) average concentrations for the upwind and downwind locations. The blanks in the table represent periods of instrument down time.

**Table 1. 24- hour Average Concentrations Concentrations in mg/m3.
UP=upwind, DN=downwind**

- **August 2, 2002 to September 16, 2002**
- **September 17, 2002 to November 5, 2002**
- **November 6, 2002 to December 12, 2002**

3.2 Sorting Building PM1O Results

The sorting building was monitored for the period from December 18, 2002 to January 17, 2003.

A gap from January 10 to 14 exists, presumably due to a power outage, as there was no equipment malfunction during the entire period.

A total of 30 24-hour periods were monitored. The minimum for the period was 0.009 mg/m3 and the maximum was 0.5 10 mg/m3. The overall average was 0.054 mg/m3, which includes all 24-hours of the day. The daytime average was 0.060 mg/m3, and the off- hours average was 0.027 mg/m3.

Figure 8 shows the data over the 30 day monitoring period.

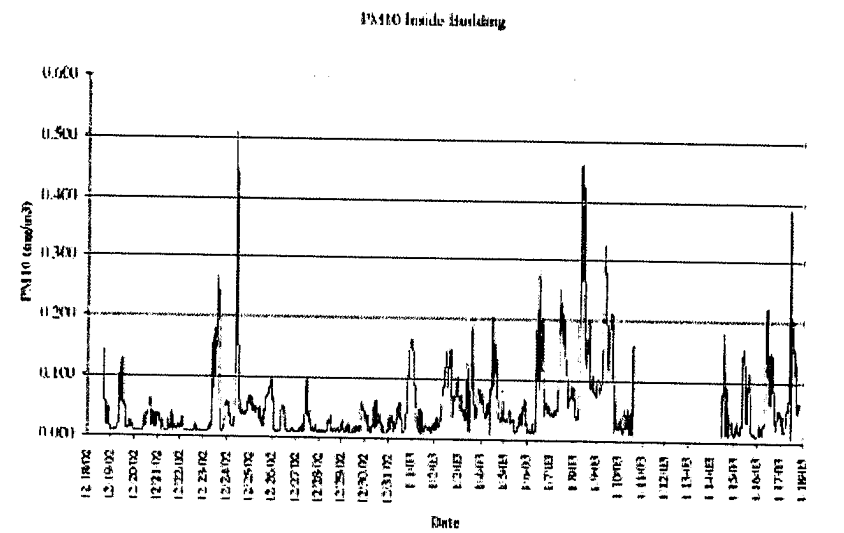

Figure 8. Sorting Building PM1O Concentrations

The periodic nature of the high concentrations is evident. When the hourly values are put into a plot of diurnal patterns, the daily work pattern emerges. Figure 9 shows the average of the hourly values over the day, with spikes at 10 AM, 12 noon, and 2 PM. The off-hour period reflects the ambient concentrations sheltered by the building.

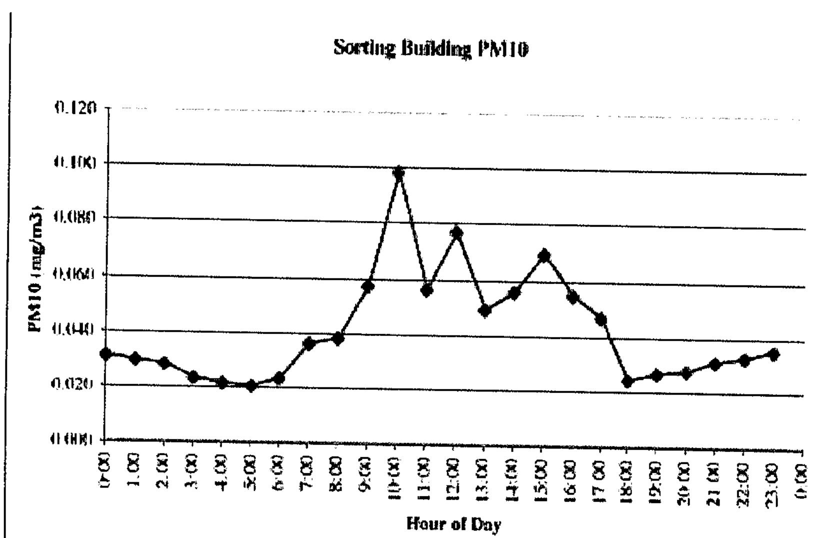

Figure 9. Sorting Building PM 10 Diurnal Pattern

3.2.1 Exposure Limits

A comparison to existing worker exposure standards shows that the PM1O concentration values measured did not exceed applicable levels. Two general standards are used for worker exposure: the Occupational Safety and Health Administration (OSHA), and the National Institutes of Occupational Safety and Health (NIOSH). For this sort of dust, NIOSH cites the OSHA standard.

No specific standard exists for dust generated from paper handling procedures. However, a general category of "particulates not otherwise regulated" exists to handle this kind of situation. The OSHA permissible exposure level (PEL) for particulates otherwise not regulated is 15 mg/m3 for total dust and 5 mg/m3 for respirable dust. While the PM 10 cutoff of the instrumentation used is slightly different from that used by OSHA, a cutoff of 10 microns is a generally accepted point for respirable dust. Therefore, the PM 10 values obtained by the EBAM can be used to compare against this standard. The PEL is defined over an 8-hour integrated work day period, so the work hours average is compared against the standard.

The work-day average for the sorting building was 0.060 mg/m3, a factor of 83 times lower than the standard of 5 mg/m3. The highest hourly concentration detected was 0.510 mg/m3, which is still approximately a factor of 10 lower than the standard. Therefore, it appears that the atmosphere in the sorting building does not pose a health standard for respirable dust from routine operations.

4. Summary and Conclusions

Monitoring for particulate matter of 10 microns aerodynamic diameter was conducted at two locations at upwind and downwind locations of the Berkeley Recycling Center from August to December, 2002. The PM1O monitoring at these upwind and downwind locations have shown that the impact from facility operations during work day is approximately 0.006 mg/m3. Higher spikes from localized transient operations do occur, but when averaged into the predominantly lower concentrations, the average for the upwind location was 0.039 mg/m3, and for the downwind location was 0.044 mg/m3. The value of 0.039 mg/m3 can be considered a general background value for the area, which is bounded by industrial and mobile sources.

Other monitoring was conducted inside the sorting building for the purpose of assessing the worker exposure to dust produced during operations there. The results showed an average of 0.060 mg/m3, a factor of 83 times lower than the applicable OSHA standard. Therefore, the dust in the sorting building does not appear to pose a hazard for workers under routine operations.

HOME

Fugitive Dust Modeling with AERMOD for PM10 Emissions from a Municipal Waste Landfill

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ABSTRACT

This paper discusses issues and challenges addressed during a project to calculate and model fugitive dust and PM10 emissions from a large municipal solid waste (MSW) landfill located in eastern Oregon. The model selected for the study, which was completed in 2004, was AERMOD Version 02222. AERMOD Version 04300 was promulgated by USEPA as a regulatory model in the *Guideline on Air Quality Models*[1] on November 9, 2005.

To permit a planned facility expansion, the Oregon Department of Environmental Quality (ODEQ) required the facility to complete an air quality impact analysis for PM10 emissions. Total PM10 emission increases, including fugitive dust emissions from haul trucks on paved and unpaved roads and from landfill waste handling, were required to be included in an ODEQ (state-only) Prevention of Significant Deterioration (PSD) analysis.

Important project issues and challenges included utilizing appropriate methods to calculate fugitive PM10 emissions for input to modeling using USEPA AP-42 Section 13, selecting AERMOD source parameter inputs, and processing representative meteorological and site characteristic data inputs. An important up-front modeling data input issue was the PM10 emission calculation methodology. Given the planned large number of haul trucks entering the facility, PM10 emissions calculations, and thus modeled impacts, were highly uncertain and sensitive to roadway length, roadway silt content, proposed dust suppression techniques, and other assumptions employed.

Passing the PM10 PSD increment threshold values was challenging. Multiple project refinements and detailed justification was made in the Air Quality Modeling Report to show compliance with ODEQ standards. Refinements are discussed in detail in the paper.

RESEARCH PROJECTS

- Pulse Introduction Membrane Extraction (PIME) for on-site analysis of VOCs in water.
- Continuous Non-Methane Organic Carbon (C-NMOC) monitoring.
- Microtrap Mass Spectrometry (MTMS).
- Microtrap - G.C for monitoring VOCs in air.
- Silicon Micromachined sensor device.

C-NMOC

CONTINUOUS NON-METHANE ORGANIC CARBON (C-NMOC) ANALYZER FOR REAL-TIME AIR MONITORING

Background | Description | Advantages | Acknowledgement | References

BACKGROUND

There is a need for simple, rugged instrumentation that can perform continuous, on-line monitoring and provide important information such as the performance of an air toxic control device without necessarily identifying individual components. Direct flame ionization detector (FID) analysis is one such method (EPA Method 25A). Commercial instruments are available where the air emissions are continuously fed into the FID. While this method is inexpensive, rugged and simple, the limitation here is that different compounds have different response factors in the FID. Consequently there is significant uncertainty in the measurement of total organic carbon measured by this instrument. The FID also responds to methane, which is neither toxic, nor an ozone precursor. There is often a high methane background due to natural gas use.

Non-methane organic carbon (NMOC) is a measure of total organic carbon in an air emission except that from methane. It is a convenient way of expressing total organic emissions in terms of carbon (e.g. ppmc or ppbc). Since speciation of different components is not required, NMOC is a fast and relatively inexpensive method. The NMOC measurement also allows different emission sources to be compared in terms of total carbon irrespective of the specific compounds being emitted. EPA Standard Method 25 has been used to measure NMOC in air emissions from stationary sources. In this method, the gas samples are collected using a canister and are sent to the laboratory for analysis. The NMOC analyzer is designed to produce an equal response for each carbon atom. An aliquot of the air sample is injected into a GC column which separate the organics from CO_2 and CH_4 . After CO_2 and CH_4 have eluted, the column is backflushed into the NMOC detector. The principle of NMOC detection is to catalytically oxidize all organic compounds to CO_2 , and then reduce the CO_2 to CH_4 which is measured by a conventional FID. The reduction step is necessary because CO_2 itself does not respond to FID.

Exhibit "E"

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The chromatographic separation is a critical issue in the conventional NMOC analyzer. For example it can not handle more than 8% CO_2 because the resolution between CO_2 and the organics decreases. Consequently, emissions such as those from combustion sources that contain large amounts of CO_2 are prone to interference. The presence of large quantities of moisture also causes problems in GC separation and produces biased results. Another problem with this method is that detection limits are fairly high as only a small sample volume (1 cm^3) can be injected into the GC column to obtain reasonable resolution. Moreover, this method is not designed for continuous, on-line monitoring. Recently we have developed a columnless NMOC analyzer that can be used for continuous, on-line monitoring. This technique is referred to as the continuous-NMOC or C-NMOC analysis.

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DESCRIPTION OF C-NMOC

In this instrument the GC column is eliminated and a micro-sorbent trap (referred to as the microtrap) is used for separation of VOCs from CO_2, CH_4 and moisture. Several ml (5 to 10) of the air sample is injected onto the microtrap using a gas-sampling valve. The microtrap selectively traps the organics but allows the rest to pass through. Thus, the microtrap serves as a separator as well as an on-line preconcentrator. Then, the microtrap is rapidly heated with a high amperage electric current. The desorption pulse serves as an injection for the NMOC detector. This method has low detection limit because a large volume of air is analyzed. Since the CO_2 and moisture pass right through the microtrap unretained, the problem of interference is also eliminated.

A schematic diagram of C-NMOC analyzer is shown in Fig. 1. The injection system consists of the pneumatically controlled gas-sampling valve with a large sample loop. The microtrap is put in series with the gas sampling valve.

The NMOC detector consisted of an oxidation unit, reduction unit and a FID. Air and H_2 were supplied as oxidizing and reducing agents to convert organics to CO_2, and to reduce the CO_2 to methane. The analysis frequency is anywhere between 30 seconds to 5 minutes. Typical monitoring involved running the air emission continuously through the gas sampling valve and periodically making injection to the C-NMOC analyzer. Corresponding to eac h injection, a NMOC peak is obtained. Results from a recent field test at a coatings facility in North Carolina is presented here. Fig. 2. shows typical output for a series of injections of the stack gas into the NMOC analyzer. The solvents from paints and coatings passed through a methane burner and a catalytic oxidizer before being vented into the stack. Thus the emissions had high concentrations of moisture, CO_2 and unburned methane from the burner. Peak 1 in the detector output of Fig. 2 is from CO_2, CH_4 and CO, while peak 2 is from NMOC.

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ADVANTAGES OF C-NMOC

- Detection limts at ppb level.
- Can be used as a Continuous Emission Monitor and also for Ambient Air monitoring.
- Stable over long periods of operation.
- Simple Instrumentaion.

- Successfully field tested.

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ACKNOWLEDGMENT AND DISCLAIMER

Although this project was funded in parts from a grant from the US EPA Office of Air Quality and Standards, it has not been subjected to agency review. Therefore, it does not reflect the views of the agency, and no official endorsement should be inferred. Mention of trade names or commercial products does not constitute endorsement and recommendation for use.

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5. Mitra, S., Xu, Y., Chen W., and Lai, A.: J. of Chromatogr. A, 727, 111-118 (1996).

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1. Please explain in sufficient detail the nature of your project and how it will operate: The nature of the development is to recieve and dispose of solid waste in appropriately constructed waste disposal cells. Waste is transported from outside of Humboldt County to the site via the Union Pacific Railroad.

Indicate proposed hours of operation: 24 hours/ day; 7 days per week

Number of customers expected: n/a

Where will customers park?: n/a

Number of parking and loading spaces proposed:

Describe any landscaping proposed: none proposed

2. Describe any additional structures proposed as part of this use (walls, fences): Section will be fenced w/ four-strand barbed wire fence. Temporary adminstrative office and equipment maintenance buildings.

3. Describe the size and shape of the site for the proposed use. Describe how the proposed use is adequate in size and shape to accommodate the proposed use: Disposal site footprint as designed by the engineer of record is approximately 600 acres. The rail infrastructure is approved by the Union Pacific railroad.

4. Describe the width and pavement type (asphalt, gravel) of the adjacent streets. Are they adequate to carry the quantity and kind of traffic generated by the proposed use? Jungo road is gravel. Private new site access road will be gravel. Both are adequate to handle employee traffic and related service vehicle traffic.

5. What are the uses on adjacent properties? open rangeland

6. Will the use affect abutting properties or the uses permitted thereon? Describe: No affect on abutting properties.

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Exhibit
"F"