

***El Dorado County
Community Development Agency – Administration & Finance Division
Interoffice Memorandum***

DATE: March 2, 2015
TO: Laura Schwartz
Chief Administrative Office
FROM: Dave Johnston, Air Pollution Quality Officer
SUBJECT: Request for Approval of Increase to Fixed Assets

Department:

Air Quality Management District

Item(s) to be added/changed:

Add \$2,575 to Fixed Assets: Equipment (6040) - for the purchase of a St. Croix Sensory, Inc. nasal ranger olfactometer.

Item(s) to be deleted or savings identified:

Delete \$1,775 budgeted for Minor Equipment (4461), and \$800 budgeted for Professional Services (4300)

Additional Information/Justification:

The Nasal Ranger is a field olfactometer, which is a portable device for detecting and measuring odors by utilizing a series of dilution thresholds. Please see attached brochure for more information.

The justification is the District's need to objectively ensure compliance with the Nuisance Rule (#205) which states:

***EL DORADO COUNTY AIR QUALITY MANAGEMENT DISTRICT
RULE 205 - NUISANCE***

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons, or to the public, or which endanger the comfort, repose, health or safety of any such persons, or the public, or which cause to have a natural tendency to cause injury or damage to business or property.

205.1 Exception: The provisions of Rule 205 do not apply to odors emanating from agriculture operations necessary for the growing of crops or raising of fowl or animals.

Budget Transfer # (if applicable)

BOS Budget Transfer being submitted concurrently with this request. Agenda item 15-0024



Nasal Ranger® Field Olfactometer



*Measure odors
with precision.*



Nasal Ranger® Field Olfactometer

The Nasal Ranger® is a portable odor-measuring device that allows users to quantify odor strength in nearly any location or circumstance. This essential tool offers an innovative, easy-to-use alternative to guessing at odor strength.

Now, facility operators, community inspectors and neighborhood citizens can conduct complete odor monitoring, regulation, enforcement and documentation in the field. The Nasal Ranger® goes beyond traditional estimation methods, easily measuring odor strength at specific locations surrounding a facility.

In 2003, Central Davis Sewer District (Salt Lake City, UT) implemented odor monitoring with the Nasal Ranger into a comprehensive facility-wide odor management plan at their 10 MGD waste water treatment plant (WWTP). The Nasal Ranger was utilized to assist in identifying odor sources throughout the facility, and, after mitigation actions were taken, the Nasal Ranger was used to quantify the success of these changes through weekly community monitoring. With these changes and a new aggressive complaint response program, the WWTP significantly reduced community odor complaints. CDSO plans to continue use of the Nasal Ranger to maintain their good relationship with the neighboring citizens.

BioCycle, Journal of Composting & Organics Recycling, September 2004



Field Olfactometry is a Necessity

Measuring odor strength is crucial for determining specific odor sources, verifying complaints, monitoring daily industrial operations and documenting specific odor episodes. Its applications are endless: industrial, agricultural, and municipal operations including wastewater treatment, landfills, composting, manufacturing and much more.

With the Nasal Ranger® you can:

- Monitor daily industrial operations
- Evaluate odor mitigation methods
- Create credible, defensible evidence
- Determine and monitor compliance
- Investigate odor control effectiveness
- Verify odor dispersion modeling
- Determine specific odor sources
- Verify odor complaints



How the Nasal Ranger® Works

The Nasal Ranger® provides a precise odor strength measurement that is consistent from place to place, facility to facility and user to user. It takes the subjectivity out of odor measurement and provides a universal standard for personnel to document odor strength in the field. The Nasal Ranger® provides a cost-effective method to confidently measure odors.

Dilution-to-Threshold

Using the Nasal Ranger® is a reliable way to quantify odor strength in terms of "Dilution-to-Threshold" (D/T) ratios. The D/T measurement is the most common method of measuring odors. This allows experts to quantify odors on a commonly recognized scale.

To make a D/T measurement, carbon-filtered air is mixed with specific volumes of odorous ambient air. The D/T ratio is a measure of the number of dilutions needed to take the odorous air to its threshold.

Calibrated for Accuracy

Because sniff rates vary from user to user, the Nasal Ranger® includes a calibrated flow sensor to increase measurement consistency. When in use, the flow sensor assures users that their "sniff rate reading" is at the inhalation target. Each Nasal Ranger® comes with a calibration certificate to guarantee accuracy.



"The portability and ease of use of the Nasal Ranger allowed the County to quantify odors around a municipal waste handling facility before and after odor mitigation efforts were introduced. The data gave us the confidence that our mitigation efforts were successful and odors from the facility would not impact the neighborhood."

Jake Smith
Senior Environmentalist
Hennepin County, Minnesota

"We have successfully used the Nasal Ranger to determine odor thresholds at animal feeding operations and other odorous industries in the Southern United States."

Susan Schiffman, Ph.D.,
Durham, NC

Researcher in the area of taste and smell and their relation to mood and well-being. She is recognized in the sensory field and specifically in the area of agricultural odors research.



Nasal Ranger® Training

A focused Nasal Ranger® training course is available through the St. Croix Sensory "ODOR SCHOOL®". This complete training program gives Nasal Ranger® users extensive knowledge and experience with its various monitoring and measuring capabilities.

Accessories



The Nasal Ranger® comes complete with Odor Filter Cartridges (4), Nasal Mask with Check Valves, Comfort Seal and storage pouch, Additional Comfort Seals (5), Isopropyl Alcohol Mask Wipes (10), Barrel Cleaning Brush, 9-Volt Battery, Shoulder Strap and Carrying Case.



St. Croix Sensory, Inc.

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www.fivesenses.com

[Nasal Mask]

Teflon coated, replaceable Nasal Mask is ergonomically designed to fit your nose comfortably. Check valves allow comfortable breathing through the mask.

[Comfort Seal]

The Comfort Seal is a disposable foam seal designed to ensure comfort of the Nasal Mask.

[Mask Wipes]

Individual isopropyl alcohol wipes are used to clean Nasal Masks between uses.

[Universal Odor-Filter Cartridges]

The replaceable odor-filter cartridges contain a proprietary blend of granular activated carbon, which is designed to remove odors from the ambient air to create the odor-free dilution air. Individually wrapped pairs of replacement cartridges attach easily to the Nasal Ranger®.

[High D/T Dial]

An alternate orifice dial allows you to expand your measurement capabilities with D/T's of 60, 100, 200, 300, 400 and 500

[Odor Sensitivity Kit]

Originally designed for physicians to measure the sense of smell, this kit has been adapted for use in the olfactometry field to measure a user's sensitivity and to provide measurable proof of a user's appropriateness for odor detection tasks.



Call today to learn
more about the Nasal Ranger®
1-800-879-9231 or visit www.nasal-ranger.com