ENVIRONMENTAL PUBLIC HEALTH REVIEW

Convent, La.

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Prepared by:

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Office of Public Health
Section of Environmental Epidemiology and Toxicology

I. INTRODUCTION

On September 11, 2003, the Louisiana Department of Health and Hospitals (LDHH)/Office of Public Health's (OPH) Region 3 Medical Director was contacted by a member of the St. James Parish Council who reported that a parish employee was complaining of a mysterious rash and uncontrollable itching. The parish employee in turn reported that there were more people with the same type of rash in Lutcher and Gramercy, Louisiana. By the end of October 2003, eight additional phone complaints of itching were received. Several of the complainants' medical records were reviewed by the Region 3 Medical Director. A community/public meeting was held on November 6, 2003 to discuss health and environmental concerns. Several additional public meetings were held with federal, state, and local agency representatives to discuss on-going solutions to the community's problems. OPH conducted a site visit and collected geographic information for use in producing a map of the area that reflected the community's environmental concerns. Several state agencies were present. OPH provided information about their programs presenting a briefing on Methicillin Resistant Staphylococcus Aureus (MRSA). In December, 2003, the Section of Environmental Epidemiology and Toxicology (SEET) received a letter from a dermatologist suggesting that an epidemiological investigation was needed in the area. Survey forms were mailed out to community representatives to collect information.

II. BACKGROUND

Convent is a small predominantly African-American Louisiana community alongside the Mississippi River in St. James Parish. Many industries and sugarcane farms are located within Convent (Zip 70723). St. James Parish has a population of 21,216 (U.S. Census 2000). Convent (Zip 70723) has a population of 2,020 including 1,546 African Americans and 465 Whites. Over 50% of the persons residing in Convent are between 5 and 39 years of age. There are a total of 588 employed persons in the Civilian Labor Force in Convent (Zip 70723). Of these 588 individuals, 28% are employed in sales and office occupations and 26% are employed in production, transportation, and material moving operations (U.S. Census 2000).

III. RESULTS

A survey prepared by the Section of Environmental Epidemiology and Toxicology (SEET) was sent to community representatives in August 2004 to collect demographic information, signs and symptoms as reported by the residents, and name and physical address of medical care provider. A consent form for the release of medical information was also included with the survey. A total of one hundred eighty-five residents submitted a health complaint either verbally or by handwritten forms. One hundred eighty survey forms were received by OPH as of February 21, 2005, reporting numerous health complaints/symptoms (See Table 1). The symptoms are ranked by percentage of occurrence from

highest to lowest (Table 1). An additional five persons submitted health complaints verbally. The most common type of health complaint reported was associated with the dermal system, "itching" being the most common symptom, either alone or in combination with other complaints. Thirty-two percent of the residents reported symptoms which affect the digestive system, with "nausea, vomiting, and diarrhea" being the most common symptoms. Thirty-three residents signed the medical record release form and indicated that OPH could have access to their medical records. Of the 185 respondents, there were 9 which did not provide dates of birth and 15 which did not provide symptoms. Sixty-four percent of the respondents who provided birth dates were adults, and thirty-six percent were children. Forty percent of the respondents were males, and sixty percent were females.

Table 1 - Health Complaints from Residents in Convent, La. 2004 [1]

Type of Health Complaints	**Percentage of Population Reporting Symptom (n=170)**
DERMAL	**84%**
Itching (63%)	
Rash (32%)	
Burning (13%)	
Boils (12%)	
Sores (4%)	
Hair Loss (4%)	
Bumps *	
Flaky legs *	
Fungal growth in head *	
RESPIRATORY	**36%**
Sinus (15%)	
Allergy (7%)	
Breathing Hard (6%)	
Asthma (2%)	
Emphysema*	
DIGESTIVE	**35%**
Nausea (16%)	
Vomiting (7%)	
Diarrhea (6%)	

NEUROLOGICAL	**29%**
Headache (26%)	
Dizziness*	
Nerves*	
EYES, EARS, NOSE and/or THROAT	**22%**
Eye infection (19%)	
Sore throat (6%)	
Ear infection (4%)	
Nose bleeds (2%)	
Nose infection *	
OTHER	**12%**
Bacterial Infection/Growths (2%)	
Blood Pressure (Elevated) (2%)	
Diabetes (3%)	
Fever (2%)	
Bone Disease*	
Back Pain*	
Bleeding *	
Chest Pains*	
Depression, Attention-Deficit/Hyperactivity Disorder (ADHD)*	
Foul Odor in Urine*	
Respiratory Syncytial Virus (RSV)*	
Staph Infections*	

***** $\leq$ 1 % cases

[1] Health complaints are reported exactly as respondents recorded them on the health survey form.

Table 2 - Health Complaints from Adults in Convent, La. 2004

Type of Health Complaint	**Percentage of Population Reporting Symptom Adults ≥19 yrs. (n=102 cases)**
DERMAL	**82%**

RESPIRATORY	**42%**
DIGESTIVE	**40%**
NEUROLOGICAL	**32%**
EYES, EARS, NOSE, THROAT	**24%**
OTHER	**15%**

Over 80% of adults reported one or more symptoms related to the dermal system (Table 2). Other commonly reported symptoms were respiratory and digestive in nature.

Table 3 - Health Complaints from Children in Convent, La. 2004

Type of Health Complaint	**Percentage of Population Reporting Symptom Children ≤ 18 yrs (n=59 cases)**
DERMAL	**85 %**
RESPIRATORY	**29%**
DIGESTIVE	**27%**
NEUROLOGICAL	**27%**
EYES, EARS, NOSE, THROAT	**22%**
OTHER	**10%**

Over 80% of the children reported one or more symptoms related to the dermal system (Table 3). Other commonly reported symptoms were respiratory, digestive, and neurological in nature.

IV. DISCUSSION

Boils, sores

Boils are usually not related to environmental conditions but are related to person-to-person transmission of staphylococci. There has been a nationwide increase in community-associated staphylococcal infections starting in the 1990s. Most of the increase is due to the expansion of a few strains of Methicillin Resistant Staphylococcus Aureus (MRSA). One-third of the population is colonized by regular *Staphylococcus aureus*; however, the prevalence of MRSA is estimated to be in the range of 2 to 10%. Staphylococcus aureus and MRSA are not present in significant amounts, nor are they persistent for long periods of time in sewage. Sludge from Kenner and discharges of untreated domestic sewage are not the source of boils. OPH is planning a prevalence survey in Louisiana and the results will be available in 2005. Outbreaks of increases in the incidence of boils have been observed throughout Louisiana and the United States. The environment does not play a major role in the transmission of Staphylococcus aureus and MRSA.

Itching, burning and rashes

Itching and rashes are very common signs and symptoms which are often related to eczema, fungal, bacterial, or viral skin infections. The skin in contact with irritants may react in what is known as "contact dermatitis." The skin becomes red and flaky. The reaction may last as long as the irritant persists. The irritant may be a cosmetic product, a cleaning product, a piece of jewelry, or a plant (eg., poison ivy). Seborrheic dermatitis is another reaction of the skin with redness, flakiness, and itching of unknown cause occurring in the groin, armpit, under the breast, and around facial hairs. Older persons tend to have dry skin, particularly on the legs. People taking many hot showers, constantly using dishwashing liquids, detergents, household cleaners, and shampoo damage their skin and suffer from dry, rough, reddened skin. Dyshidrosis is a type of eczema with blisters, which after bursting leave a brown spot under the skin for several weeks. Itching and rashes are more likely to be associated with allergies and local skin irritants commonly found in the household. Review of the medical records authorized to date has not shown any other causes of itching.

Nausea, vomiting and diarrhea

Gastrointestinal complaints are very common in a population. One-hundred percent of people experience one or two episodes of diarrhea per year, 50% of these episodes cause at least one day of inactivity. Enough information about this symptom is not available at this time to isolate an environmental cause.

Headaches

Headaches are very common. Twenty million Americans (almost one of ten) see their doctor each year because of a headache. Many more suffer from occasional headaches and do not consult their doctor. The vast majority of headaches are not medically serious. Most can be controlled by the use of simple medications - and in the case of tension headaches, by altering habits or lifestyles. The most common type of headache is "tension headache" but they are not actually caused by increased muscle tension. In a study of adolescents, 26.0% reported frequent headaches of "about once a week" or more often; in a study of elderly patients the proportion experiencing tension headaches was 51.0% with the following distribution: respectively 44.5% for tension headaches, 11.0% for migraine headaches, 2.2% for symptomatic headaches, and 0.7% for the remaining types of headache. In a CDC report, the prevalence of migraine headaches was in the order of 2.0-3.0% of the entire population.

V. MEDICAL RECORDS REVIEW AS OF 5/10/05

The self-reported signs and symptoms do not point to any unusual condition. A review of medical records is necessary to verify that these common signs and symptoms are not the result of some specific disease. The medical records reviewed to date confirm that the causes are not different from those listed above.

A consent form authorizing OPH to obtain complainants' medical records was distributed with the

health survey form. Once consent for the release of records was obtained, the Region 3 Epidemiologist sent for the particular patient's records. Upon receiving the records from the physicians the Region 3 Medical Director, the Regional Epidemiologist, or a combination of the two, reviewed the records and entered the data into a database.

Conclusions of Medical Record Review

In summary, a total of 41 records have been requested to date. Twenty-four records have been received (58.5% response rate), and an additional 4 records have been accounted for as follows: 1) One physician could not locate a particular individual's record; 2) One physician gave a verbal report (no record received) as much as could be recalled; 3) One physician requested another consent from the patient; 4) One physician sent the consent back with no explanation and no record. A review of these 24 records did not indicate any unusual amount of a certain type of disease or infections that could be attributed to any environmental hazards (Table 4).

Table 4: Medical Record Review as of 5/10/05

Diagnosis	Number of Symptoms	% of respondents (n=24)
Abscess/Boil	4	16
Arthritis	1	4
Bronchitis	2	8
Coronary Artery Disease	1	4
Congestive Heart Failure	2	8
Cold	1	4
Colon Polyps	1	4
Chronic Obstructive Pulmonary Disease	1	4
Cerebrovascular Disease	1	4
Denture Ill Fitting	1	4
Diabetes Mellitus	2	8
Eczema/Dermatitis	4	16
Gastrointestinal Disease	7	29
Hypertension	4	16
Hyperlipidemia	1	4
Infection/Incision	2	8

Itching	8	33
Rash	8	33
Scabies	2	8
Stye	1	4
Upper Respiratory Infection/Sinus/Pneumonia	7	29

VI. ENVIRONMENTAL CONCERNS

The residents attribute their health problems to:

- Drinking water quality
- Sewerage system, Individual sewage disposal
- Sugar cane burning
- Grain dust
- Corn gluten
- Aerial application of pesticides on sugar cane fields
- Chemical releases to the air
- Sewage sludge application

Drinking water quality

No specific individual complaints were voiced at the public meeting regarding the possibility of symptoms caused by water contact or by water consumption.

Sampling of drinking water was conducted on February 19, 2003. The Primary Drinking Water Regulations establish MCL's (Maximum Contaminant Levels) for various substances that could be in drinking water. There are three contaminants that have an impact on skin. They are arsenic, chromium, and Polychlorinated biphenyls (PCBs). Samples were collected from St. James Water District No. 1, which is made up of 1,975 water connections and 13 community water systems serving the Convent area. The sample results show all three chemicals were not detected. Therefore, the drinking water is not causing the reported symptoms (Report from David Boggs, OPH Region 3 Engineer). There were no violations of the Safe Drinking Water Policy (SDWP) MCLs for the years 2002 and 2003 (Statement from Karen Irion, OPH/Safe Drinking Water Administrator).

Effective January 1, 2004, EPA's enforceable drinking water standards (MCLs) for trihalomethanes (THMs) and haloacetic acids (HAA5) for this system were lowered from 100 ppb and 80 ppb respectively, to 80 ppb and 60 ppb, respectively. These drinking water standards, which were lowered, went into effect at the beginning of 2004. The only violation noted for St. James Waterworks District #1- Convent (LA1093004) was of the Disinfectant/Disinfection By Product Rule (D/DBP) {40 CFR 141.64(a)] in the third quarter of 2004 by exceeding both the THM and HAA5 MCLs. The St. James water system has been monitored for THMs in the past, and has previously been in compliance. St. James Water District #1 is working with TMB, Inc., water treatment consultants based in Zachary, La., to control the present D/DBP problem. The new more conservative standards are based on lifetime exposure, and any adverse impact from a violation lasting a few quarters would not be expected. A pilot study is now being performed in which chloramines are being used as an alternative disinfectant to control the D/DBPs (Statement from Clyde Carlson, District Engineer). D/DBP monitoring is done quarterly, and compliance monitoring for all public water systems continues to be accomplished on a routine basis.

Sewerage system, Individual sewage disposal

There are 253 permitted individual sewage treatment systems. The remaining households utilize septic tank systems, which, in general, are inadequate and poorly maintained. Both the small lot size of these residences and the limited permeability of the soils in some locations make it difficult to install sufficient drainfields. One home's septic system was deemed unacceptable because of a rusted and broken cover on the septic tank. During the August 3, 2004 OPH visit to Convent, several houses seemed to be discharging untreated sewage into a ditch at the back of the houses on several streets. Inadequate disposal of home sewage creates unsanitary conditions, which could result in diarrheic illness. However, only a small percentage of respondents (6.5%) reported diarrhea as a health complaint.

Sugar cane burning

The practice of burning sugar cane residue after harvest occurs annually in this area. Burning is the most cost effective method of clearing post-harvest residues from the fields in preparation for the next planting season. Burning occurs from October to December (sometimes extending from mid-September to January). St. James Parish, with 6,200 acres of sugar cane represents 6% of the state's total sugar cane farming area. The primary health effects associated with sugar cane burning are respiratory in nature. A study conducted in St. James, St. Charles, St. John, Assumption, and Terrebonne parishes during 1998-1999 documented the number of asthma hospitalizations at Chabert Medical Center in Houma. A definite increase in asthma admissions was observed during the sugar cane burning season. However, any effects from pollen, weather, and air pollution from non-sugar cane sources were not taken into account (Boopathy , et al., 2002. "Sugar cane burning and asthma in Southeast Louisiana." Bulletin of Environmental Contamination and Toxicology 68: 173-179). Asthma is not among the health complaints reported from this population.

Grain dust

To evaluate residents' concerns about grain dust, it is necessary to document the location of grain elevators, the surrounding population, and the health complaints of the surrounding population.

Corn gluten

Corn gluten pellets are made from residue of corn starch production then compressed into small pellets. The pellets are about 2 inches in length with diameters ranging from .25 to .5 inches (Transport Information Service; www.tis-gdv.de/tis_e/ware/futter/pellets). The primary use of corn gluten pellets is feedstuff for poultry, cattle, and pigs. Pellets are shipped as bulk cargo on barges originating from the midwestern part of the United States. The majority of corn gluten is shipped during the months of September, October, and November. Corn gluten pellets require particular temperature, humidity/moisture and ventilation conditions. When these conditions are breached, corn gluten is at risk of self-heating/spontaneous combustion. During transport down the Mississippi River, corn gluten cargo can combust and ignite on the barge. Weber Marine Inc. located close to the Sunshine Bridge in St James Parish salvages barges with ignited corn gluten. According to the Louisiana Department of Agriculture & Forestry's (LDAF) Office of Soil Water & Conservation, in 2003, there were between 10 to 15 corn gluten barge fires salvaged by Weber Marine Inc.

Burning corn gluten produces a strong, offensive odor. Fires on barges can smolder for up to 2 weeks. Corn gluten from fire-damaged barges is removed from the barge by crane and transported to a large corn gluten stack on Helvetia Street in St. James Parish. At times, corn gluten is still smoldering when transported to the stack. Once extinguished, the stacked corn gluten continues to produce a strong, musty odor. Health concerns associated with burning and smoldering corn gluten are primarily related to its noxious and persistent odor. According to LDAF's Office of Soil and Water Conservation, there is a minimal amount of smoke associated with the fire. Corn gluten pellets can create dust during handling; however, the dampened pellets are unlikely to create a significant amount of dust.

When corn gluten has been damaged by fire and deposited on land, it is considered a solid by-product. Its primary use as feedstuff is no longer applicable. Best Management Practices (BMP) for fire-damaged corn gluten were developed by the U. S. Department of Agricultures' Louisiana State University Extension Service and Natural Resource Conservation Service and approved by LDAF. The BMP recommends applying corn gluten to sugarcane fields in order to enhance the nutrient value of the soil. Gluten pellets are applied by spreaders and incorporated into the soil. Health risks for St. James residents associated with corn gluten applications to soil are minimal.

Aerial application of pesticides on sugar cane fields

The primary crop in St. James Parish is sugarcane. The pesticides most commonly used on sugarcane are Asana® (esfenvalerate), Bathyroid® (cyfluthrin), Confirm® (tebufenozoide), Karate® (λ cyhalothrin), Pendimethalin®, Terbacil®, and Trifluralin®. Some of these products are used in limited areas or in very small quantities. Pesticides are typically applied to sugarcane fields by aerial applicators. St. James residents living, working, or going to school near sugarcane fields are at risk of exposure to pesticide drift during aerial applications. Based on statewide surveillance data, the most common health effects associated with acute exposure to aerial applications of pesticides are headaches, nausea, and skin irritation. These effects are usually transitory and do not cause long term chronic effects.

SEET has received only one complaint from a Convent resident regarding aerial application of pesticides in five years (1999-2004). In July 2000 a resident along Highway 44 complained of aerial drift of 2,4D. This complainant reported upper respiratory and eye irritation; symptoms improved with no sequelae.

Chemical releases to the air

According to recent Toxics Release Inventory (TRI) reports, chemicals that have an association with rashes, the chief health complaint of the residents, are not released in St. James Parish. Section 313 of the Emergency Planning and Community Right to Know Act (EPCRA) requires facilities to report releases of toxic chemicals if they exceed the "manufacture" or "process" threshold of 25,000 pounds or the "otherwise used" threshold of 10,000 pounds, for any listed toxic chemical. According to 2003 TRI data, 2.7 million pounds of chemicals were released into the air from nine St. James Parish facilities giving the parish an overall ranking of 6th in the state for total releases to the air. Four compounds, ammonia, sulfuric acid, styrene, and hydrochloric acid, made up over 90% of the total releases to air in St. James Parish in 2003. When present at high concentrations, these chemicals may be associated with various health consequences.

Sewage sludge application

Generic complaints had been voiced regarding concerns about the city of Kenner's authorization to apply sludge in sugar cane fields surrounding the area.

The City of Kenner performed lab analysis of the sludge that is applied in the sugar cane fields. The Kenner sludge is a class B sludge, consistently meeting class B criteria for the past 4 years. Class B biosolids must contain less than two million colony forming units (CFU) of fecal coliform per gram of total solids (dry weight). The sludge data reviewed showed coliform concentrations averaging 698,000 coliforms CFU /g.

According to the City of Kenner's wastewater sludge data analysis report for the monitoring period 02/01/01 – 02/01/03, the sludge contains between 17% and 22% of solids. The sludge is moist, and application does not create dust. The chemical parameters are well below the permitted levels (in most cases at < 10% of permitted levels). PCB and heavy metals levels are below regulatory limits as well.

EPA restricts public access to areas treated with biosolids B sludge but does not restrict occupational access to these areas. The risk of worker exposure to infectious agents is greatest during and immediately after land application of the biosolids. Because the concentration of pathogens decays through natural processes, the potential for pathogen exposure decreases over time.

In other settings, the association between poor hygiene, raw sewage, and infectious disease is well established. Most of the pathogenic bacteria and viruses in Class B biosolids are enteric, which means they are present in the intestinal tracts of human and animals. Enteric organisms that may be found in Class B biosolids include, but are not limited to, *Escherichia coli, Salmonella, Shigella, Campylobacter, Cryptosporidium, Giardia*, and enteroviruses. These enteric organisms are usually associated with self-limited gastrointestinal illness. Other microorganisms can also be found, for example MRSA can sometimes be found as a gut colonizer. However, if there is a pathway for biosolid pathogens to reach a human population, outbreaks of gastro-enteritis would be the primary expected health effect.

Farmers live in close proximity to large quantities of manure and usually do not suffer health effects if the environment is well managed. An average cow produces between 60 and 120 lbs of wet raw manure/day or 10 to 20 tons per year. A herd of 1,000 heads of cattle would produce 20,000 tons of wet raw manure per year. It is not unusual for stool samples to contain 10 million *E.coli* per gram, which is equivalent to 10 trillion/ton. For some other pathogens the concentration may reach 10 trillion per gram (Gerba CP 2000. Assessment of Enteric Pathogen Shedding by Bathers during Recreational Activity and its Impact on Water Quality. Quantitative microbiology Vol 2 No. 1 pp 55-68).

Sewage sludge may cause an odor problem when sludge application to the surface of a field is followed by tilling. This can be corrected by increasing the buffer zone, which results in moving the sludge further away from residences. The sludge could also be injected subsurface, which would assure that the odors would not readily escape to the air. Sludge application does create obnoxious odors that are likely to cause discomfort to the neighboring population but are unlikely to cause rashes, boils and itching which are the main complaints.

After four years of spreading treated sewage sludge on sugar-cane fields in St. James Parish, Louisiana, FTM and Associates has recently withdrawn its request for a permit. According to the Department of Environmental Quality (DEQ), the company stopped spreading the material by December 31, 2004. The Assistant Secretary for Environmental Services at LDEQ reported that this action should alleviate concerns

of area residents in St. James Parish who were opposed to the local spraying and reported it as the cause of their health problems. He also stated: "All the facts point that if its applied properly, there's no risk to human or environmental health." (The Advocate, December 10, 2004).

VII. CONCLUSIONS

This Public Health Review documents the status of the assessment of health complaints and environmental concerns expressed by the residents in Convent, La. Although many health concerns were reported in the surveys by the residents, none of these health concerns can be attributed with absolute certainty to the environmental conditions in Convent, La. The majority of health complaints reported were related to the dermal system, i.e. itching, rashes, boils, etc.; however, these health concerns cannot be attributed to the environment.

VIII. RECOMMENDATIONS

Public Health Action Plan

1. Distribute fact sheets, information pamphlets, and other forms of written information as requested to Convent residents.

2. Organize and hold a health fair.

3. Review medical records of residents who have consented for their release/review and update as needed.

4. Map the areas of concern.

Public Health Actions Taken

1. Health Review prepared.

2. Health fair in planning process.

3. Map of Convent area with points of concern was produced in December of 2004.

4. Complaint survey was produced and distributed. Collated data was summarized in the Health Review.

5. Medical release forms were distributed, collected, and redistributed.

6. Compliance monitoring for all public water systems in the area continues on a routine basis.

7. Documented complaints of unsanitary conditions will be investigated, and action will be taken if necessary and appropriate.

APPENDIX

This report was written at a point in time at which every attempt was made to include complete and accurate information. DHH will support any follow up an agency wishes to undertake based upon the findings in this report. Questions/Comments received during the public comment period and applicable to environmental public health are addressed herein.

1. *Community question*:
   The study area does not address the entire area of concern (if it is a study of the entire St. James Parish, then it should specify that in the report).

   Agency's response: DHH addressed the originally designated area and would be happy to address any specific areas of health concern provided by the community.

2. *Community question:*
   The report does not address cumulative impacts that affect the community.

   Agency's response: Although the review was issued specifically in response to health concerns among residents of Convent, La., the relationships between any known risk factors and health complaints/symptoms in Convent are beyond the scope of this review.

3. *Statement*: Survey forms were mailed out to community representatives to collect information.

Question: How were the community representatives identified?

Agency's response: Survey forms were provided to the individuals who contacted DHH for assistance.

4. *Statement:* Convent is a small predominantly African-American Louisiana community alongside the Mississippi River in St. James Parish.

Question: How many square miles is it?

Agency's response: Convent, La. has no official city boundary. The zip code, 70723, which includes Convent, is approximately 48.71 square miles in area.

5. *Statement:* A review of these 24 medical records did not indicate any unusual amount of a certain type of disease or infections that could be attributed to any environmental hazards (Table 4).

Questions/Comments: What follow-up has been done to get the other 17 records according to patient's signed consent? What is the status of consent forms for the remaining 124 residents?

Agency's response: An earnest effort was made to obtain the information for those individuals for whom we had consents forms. DHH made repeated phone calls to physicians' offices and hospitals who had not responded to medical records requests. Of the 17 records pending, we have not received 10 of them.

6. *Statement*: Based on statewide surveillance data, the most common health effects associated with acute exposure to aerial applications of pesticides are headaches, nausea, and skin irritation.

Questions/Comments: These health effects were reported in the survey. Are they related?

Agency's response: The health effects such as headaches, nausea, and skin irritation may or may not be related to acute exposure to aerial applications of pesticides. More information is needed to make this determination.

The following statements (7-8) refer to methicillin resistant Staphylococcus Aureus (MRSA):

7. *Statement*: Sludge from Kenner and discharges of untreated domestic sewage are not the source of boils. OPH is planning a prevalence survey in Louisiana and the results will be available in 2005.

Questions/Comments: The section entitled "Other Environmental Concerns" lists MRSA as a component of class B sludge. Is this prevalence survey under-way? When will the results become available?

Agency's response: The prevalence study is complete, however, the results have not yet been released.

8. *Statement*: Outbreaks of increases in the incidence of boils have been observed throughout Louisiana and the United States.

Questions/Comments: Reference this statement.

Agency's response: Dr. Raoult Ratard, State Epidemiologist

9. *Statement:* In a CDC report, the prevalence of migraine headaches was in the order of 2.0-3.0% of the entire population.

Questions/Comments: Reference this statement.

Agency's response: Dr. Raoult Ratard, State Epidemiologist

10. *Statement:* Other microorganisms can also be found, for example MRSA can sometimes be found as a gut colonizer.

Questions/Comments: In this community, is it possible that the environment can play a role in the transmission of MRSA because of the application of the biosolid B?

Agency's response: It is extremely unlikely that there would be an increase in the

transmission of MRSA because of the application of biosolids. In fact, MRSA is no more prevalent in countries with inferior sanitary conditions. Furthermore, MRSA is no more prevalent among occupational groups that work in close proximity to treated and untreated sewerage. Dr. Raoult Ratard, State Epidemiologist

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IX. REFERENCES

1. Amy Wold. "Company to Halt Sewage Fertilizer Use." *The Advocate.* 12/10/2004.

2. "Environmental Justice in Louisiana." Available at: www.cqs.com/news/rehw/r615.htm.

3. John McMillian. "Health Complaints in St. James Parish spur investigation." *The Advocate.* 6/11/2004.