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DEPARTMENT OF ENVIRONMENTAL SERVICES

CITY AND COUNTY OF HONOLULU

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January 13, 2014

IN REPLY REFER TO:
FORM 14-003

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CITY COUNCIL
HONOLULU, HAWAII

The Honorable Ernest Y. Martin, Chair
Honolulu City Council
530 South King Street, Room 202
Honolulu, Hawaii 96813

Dear Chair Martin:

SUBJECT: Resolution 13-267, CD1, FD1

In response to Resolution 13-267 CD1 FD1, adopted by the City Council on December 11, 2013, we provide answers to the six questions as follows:

1. **What is causing the noxious sewage gases/stench odors in Kakaako, including the locations identified at specific street intersections above? (note: refers to Auahi and Keawe Streets intersection, the Auahi and Kamakee Streets intersection, the South and Queen Streets intersection, the South Street and Ala Moana Boulevard intersection, the South and Auahi Streets intersection, the Auahi and Queen Streets intersection, and the Piikoi Street and Ala Moana Boulevard intersection.)**

Answer:

In general, where odors are found to be emanating from the sewer system, such odors are caused by a build-up of pressure, greater than the atmospheric pressure, within the air space within that system. The pressure build-up can be caused by a number of situations, included but not limited to: 1) changes in sewage velocities; 2) changes in pipe diameters; 3) changes in sewage levels; 4) irregular interconnections; and 5) cross-sectional constrictions and restrictions.

2. **What is the City, through its Department of Environmental Services and other appropriate departments, doing to correct and eliminate this problem, including the implementation of recommendations of the study by R.M. Towill conducted in the past year?**

Answer:

The condition of foul air emanating from the sewer system is a challenge that all larger municipalities experience. To address the condition, the City has taken the following actions: 1) evaluated and changed the operating parameters within the existing Ala Moana Pump Station to reduce the instances of pressure build-up within the sewer system; 2) conducted an evaluation of the use of in-line devices to isolate the City sewer from individual sewer services and to cutoff the migration of foul air from the sewer system service; 3) installed granular activated carbon scrubbers within sewer manholes within the Kakaako area to reduce the release of fugitive odors; 4) conducted public surveys within the Kakaako area to gather data on the nature, location and frequency of odor releases; 5) scheduled a fan test to determine the sizing and effectiveness of centralized odor control unit(s) for potential and future odor control unit(s); and 6) are proceeding with recharging the odor control units at the Ala Moana Pump Station.

- 3. What is causing the noxious sewage gases/stench odors to emanate from the Ala Moana Pumping Station, which collects most of the sewage flowing through City sewerlines?**

Answer:

Please see the answer to question number 1.

- 4. What is the City, through its Department of Environmental Services and other appropriate departments, doing to correct and eliminate this problem?**

Answer:

Please see the answer to question number 2.

- 5. Why has the City Department of Environmental Services provided conditional approvals for sewer line hook-ups for pending projects to build up to 5,000 new residential units when the current noxious sewage gases/stench odors problem has not yet been resolved? What conditions have been attached to the approvals given to recent major residential projects in Kakaako?**

Answer: The Department of Planning and Permitting, Wastewater Branch, (DDP/MWB) has the lead role in Sewer Connection Application (SCA) reviews. The adequacy of the sewers, sewage treatment, and/or sewage disposal facilities is checked for capacity before issuing a sewer connection application or approving a building permit. Conditions to approvals for recent major residential projects in Kakaako relate to the location of sewer connections and adequacy of the hydraulic capacity of the sewer system. Efforts to address odors related to the sewage system are concurrent to the

permit approval process, but do not preclude one another. From a technical view point, the flow added by new customer connections for which there is hydraulic capacity does not necessarily worsen the odors in sewage nor necessarily affect the conditions that possibly cause odors to emanate.

Furthermore, the potential solutions to addressing odors are as listed in the answer to question number 2, and do not include the reduction of the average wastewater flow.

6. How does the City Department of Environmental Services ensure that current problems regarding noxious sewage gases/stench odors are addressed when determining whether to grant conditional approvals for sewer line hook-ups to proposed new projects?

Answer:

Our Department and the Department of Design and Construction are working to address the odors related to the sewage system. These efforts are concurrent to the permit approval process. As stated in the answer to question number 5, the adequacy of the sewers, sewage treatment, and/or sewage disposal facilities is checked for capacity before issuing a sewer connection application or approving a building permit.

Should you have any questions on the attached information, please call me at 768-3486.

Sincerely,



Lori M.K. Kahikina, P.E.
Director

cc: Department of Design and Construction
Department of Planning and Permitting

APPROVED:



Ember Lee Shinn
Managing Director