

Temporary Hydrogen Sulfide Nuisance Prevention Protocol Effective Only for 201~~87~~-201~~98~~ Season

Adopted 10/31/03; Revised 10/18/05, 12/9/10; 9/28/17; 8/27/18

This protocol is adopted to minimize exposure to the public from the release of hydrogen sulfide (H₂S) at levels that constitute a public nuisance. The protocol and its provisions are incorporated into the District Permits to Operate for dredges “Twin Lakes” and “Squirt”, and are enforceable through the provisions of Air District Rule 200. It is recognized that for the duration of the 201~~87~~-~~198~~ dredge season, the County of Santa Cruz Twin Lakes Beachfront Improvement Project’s construction ~~work-zone~~activities may continue to create physical barriers for the monitoring program and is a potential source of hydrogen sulfide (H₂S) which may affect the H₂S monitor operated by the District. This temporary Hydrogen Sulfide Nuisance Prevention Protocol, dated 8/13/18, 9/29/17, ~~applies has been extended to cover during~~ the 201~~87~~-~~198~~ dredge season, ~~when work on the County of Santa Cruz Twin Lakes Beachfront Improvement is underway.~~

A. Avoidance of beach discharge.

To the maximum extent feasible, the Port District shall discharge dredge sediments with H₂S odor potential under water, outside of the beach zone¹ whenever the wind is onshore.

B. Discretionary beach discharge²

Whenever the Port District elects to direct the sediments from its dredging operation into the beach zone, and when the wind direction is onshore (from between 090 degrees south through 270 degrees magnetic), it shall implement the following practices.

1. Give public notice of the intention to conduct beach discharge as much in advance as is possible by posting a conspicuous notice on the Harbor’s web site.
2. Operate an Air District-approved hydrogen sulfide monitor, which automatically samples and records data on the basis of one minute sampling intervals.

- (a) The vehicle-mounted H₂S monitor shall be operated from a stationary

¹ “The Beach Zone” is the area from East Cliff Drive seaward to the point where the water depth allows the pipe, while discharging sediment, to create a visible surface disturbance. The seaward extent of this zone will vary with the tide and sediment accretion.

² “Discretionary beach discharge” occurs when the Port District elects to deposit dredge sediments into the beach zone at a time when dredging is not immediately necessary to clear, or keep clear, the Harbor channel, or to protect any onshore asset, such as roads, utilities or other structures.

position parked adjacent to the dredge monitoring tower.

(b) The H₂S monitor shall be operated and maintained according to manufacturer specifications, and shall be sited so that it is protected from conditions that could adversely affect its performance.

(c) The H₂S monitor shall be checked for accuracy by performing the zero check every day of operation before beginning monitoring, according to the manufacturer's specifications.

(d) Anemometers approved by the Air District shall be located and operated as follows:

(1) A directional wind indicator approved by the Air District shall be collocated with the H₂S monitor to continuously provide a conspicuous indication of wind direction, and

(2) An anemometer approved by the Air District, which records wind speed and direction, shall be located at a position at the Harbor Beach approved by the Air District.

(e) The Port District shall maintain the following records for each day of dredging for three years:

(1) The H₂S monitor's data output,

(2) The anemometer's data output.

(3) A log recording dredge events, including for each date of beach discharge at least:

(i) Time of commencement of beach discharge,

(ii) Time of termination of beach discharge,

(iii) Reason for termination of beach discharge,

(iv) If termination was required by H₂S monitor readings, the readings which triggered termination and all subsequent readings recorded by the monitor until they returned to below 15 ppb, and

(v) Notation of whether the County's Twin Lakes Beach Improvement construction project was also in operation.

(4) A detailed log of all odor complaints received by the Port District, describing at least:

(i) Complainant's name and location,

(ii) Time and date of complaint,

(iii) Period of operation complained of,

(iv) Summary of complaint,

- (v) Physical symptoms complained of, and
- (vi) Any operational response to remedy complaint.

3. Terminate discharge into the beach zone whenever:

- (a) The H₂S monitor rolling one hour average of 15 ppb is exceeded on days when discharge coincides with construction activities and/or construction activities have been performed in the preceding 48 hour period leaving an open excavation area and/or stockpiled, excavated materials, or
- (b) The H₂S monitor rolling one hour average of 10 ppb is exceeded on days without construction activities. If construction activities have been performed in the preceding 48 hour period leaving an open excavation area and/or stockpiled, excavated materials, 3(a) shall apply, or
- (c) The H₂S monitor is removed from service.

4. After such termination:

- (a) Beach zone discharge may be resumed when the H₂S monitor is placed back in service.
- (b) If beach zone discharge is terminated pursuant to 3(a) above, the H₂S monitor shall continue to operate and record H₂S concentrations until they return to below 15 ppb and remain there for at least 10 minutes.
- (c) Beach zone discharge that is terminated pursuant to 3(a) above may resume the next hour after the dredge operation is modified to reduce H₂S emissions in accordance with 4(b).

5. Emissions associated with the harbor dredging operation shall not exceed an H₂S monitor rolling one hour average of 30 ppb.³

C. Emergency Beach Discharge⁴

Whenever the Port District is required by circumstances beyond its control to direct its dredge sediments into the beach zone, and when the wind direction is onshore (from between 090 degrees south through 270 degrees magnetic), it shall implement the following practices:

1. Comply with the requirements of sections B.1 and B. 2 above.

³ It is not the intent of these protocols to make the District responsible for emissions from the County's work.

⁴ "Emergency beach discharge occurs when the Harbor has to deposit dredge sediments into the beach zone because either: dredging is immediately necessary to clear, or keep clear, the Harbor channel to design depths, and the offshore outfall is incapacitated or unusable due to weather, sea conditions, breakage or shoaling, OR a public official having responsibility for public asset declares in writing that immediate beach replenishment is necessary to prevent damage to an asset such as roads, utilities, or structures.

2. Give advance notice as follows:

(a) Notify the Air District by email or phone, as soon after the decision is made as possible, of the intention and rationale to conduct emergency beach discharge and the anticipated period of such discharge, and

(b) Notify the public of the intention to conduct emergency beach discharge as soon as possible after the decision is made by posting a conspicuous notice on the Harbor's web site and by giving individual notice to any member of the public who has requested such notice.

3. Terminate discharge into the beach zone any time the H₂S monitor is removed from service.

4. After such termination, beach zone discharge may be resumed when the H₂S monitor is placed back in service.

5. Emissions associated with harbor dredge operations shall be curtailed to maintain an H₂S monitor rolling one hour average of less than 30 ppb.

D. Public Information Sign

1. During the dredge season, if there will be any beach zone discharge during the season, the Port District shall place at the beach front a semi-permanent sign at each beach location where other explanatory beach signs are installed, with a size and conspicuity equal to the existing beach signs, that recites the following information:

Notice

"The Santa Cruz Port District dredges the Harbor channel between November 1st and May 1st each year. Dredge sediments are sometimes discharged to this area of the beach and may contain decomposing seaweed which can release hydrogen sulfide, a gas recognized by its rotten egg smell.

Because hydrogen sulfide can cause a public nuisance and possible adverse health effects, the Port District operates its dredge under a special permit from the Air District, which requires cessation if measured hydrogen sulfide levels from the dredging operation reach specified limits.

For information or complaints, you may call either:

The Air District Office at: 647-9411, or
The Port District Office at: 475-6161"