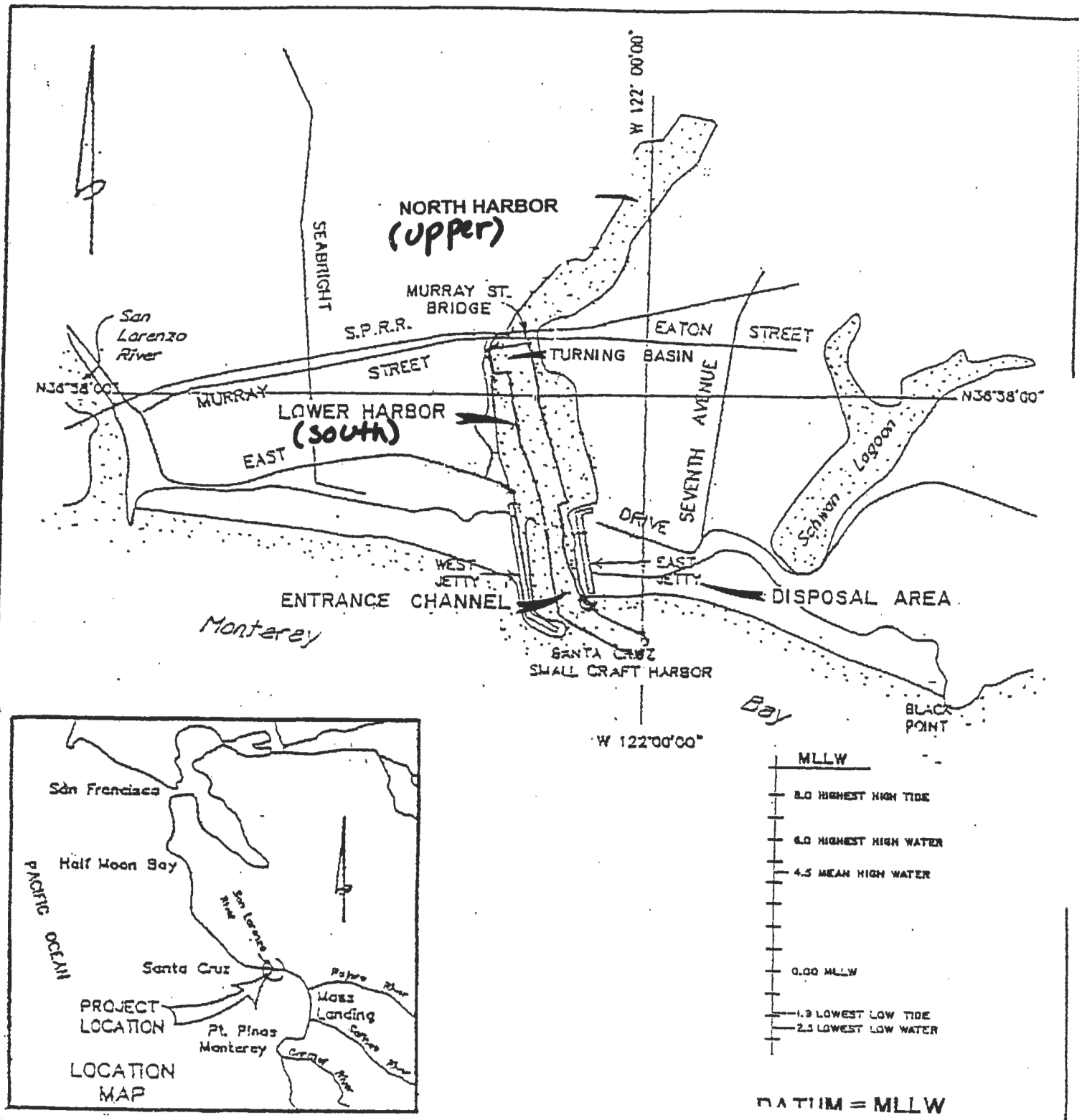

DATUM = MLLW

PURPOSE:

Demonstration II Dredging Project
October 2005
Dredging of 10,000 CY of sediment
from north harbor.

DATUM: MLLW

VICINITY MAP

0 1000 2000

SANTA CRUZ PORT DISTRICT
135 5th AVENUE
SANTA CRUZ, CA. 95062

EXHIBIT NO.	1
APPLICATION NO.	3-05-065-A2
	pg 1 of 1

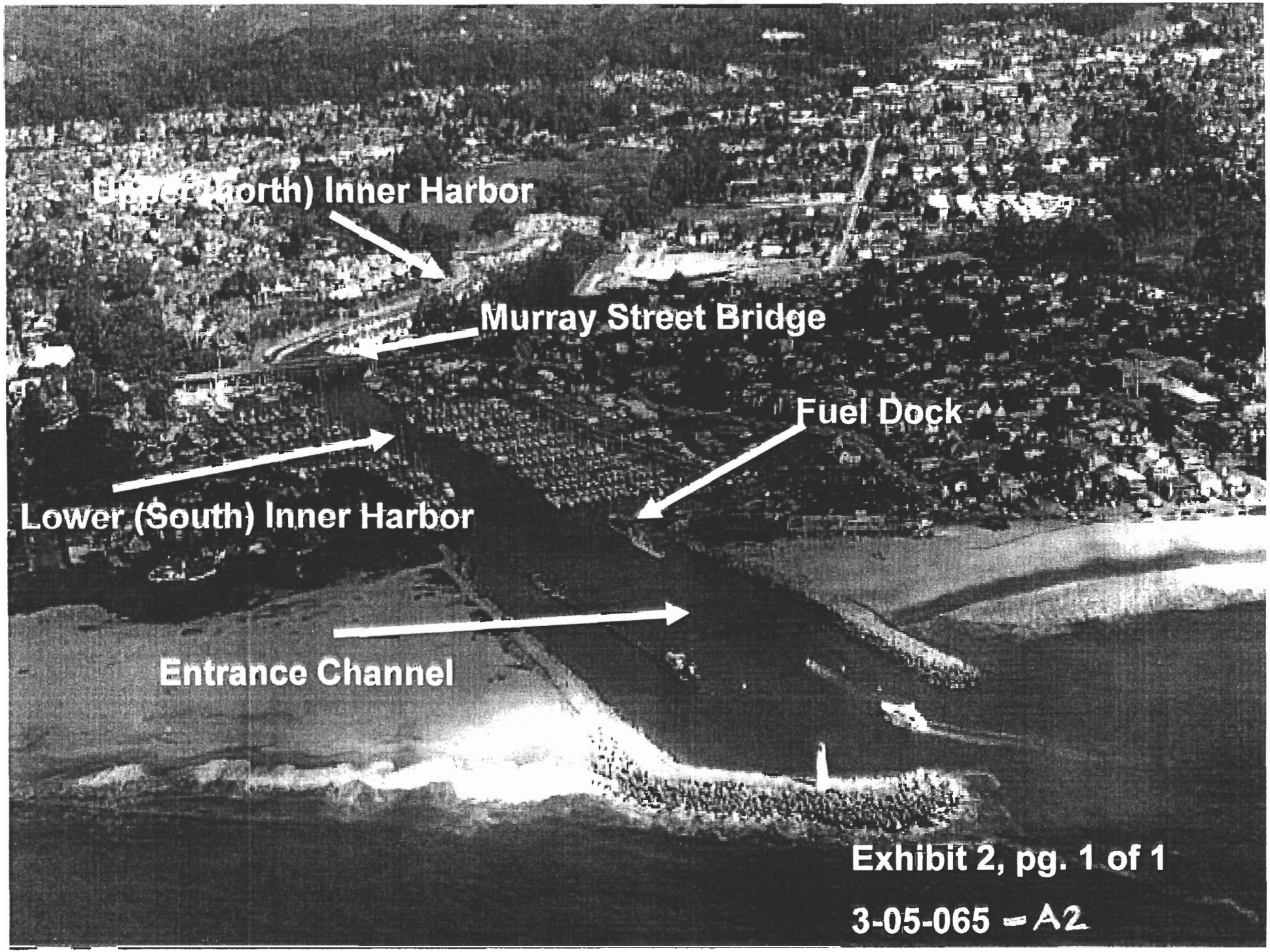

Exhibit 2, pg. 1 of 1

3-05-065 – A2

EXHIBIT NO. 3
APPLICATION NO.
3-05-065-A2
pg 1 of 1

AUG 17 2006

Pipeline modifications

Modifications to the current dredge pipeline configuration on Twin Lakes Beach are proposed by the Santa Cruz Port District. The harbor proposes three pipeline configurations spanning from the east harbor jetty to Schwan Lagoon. Each of the three configurations will have several different discharge points based on the flexibility and mobility of the pipelines (Figure 1). When extended into the ocean, the pipelines will not be anchored to the seafloor. The proposed pipeline configurations will provide the harbor with the flexibility to respond quickly to changing oceanographic conditions or other factors.

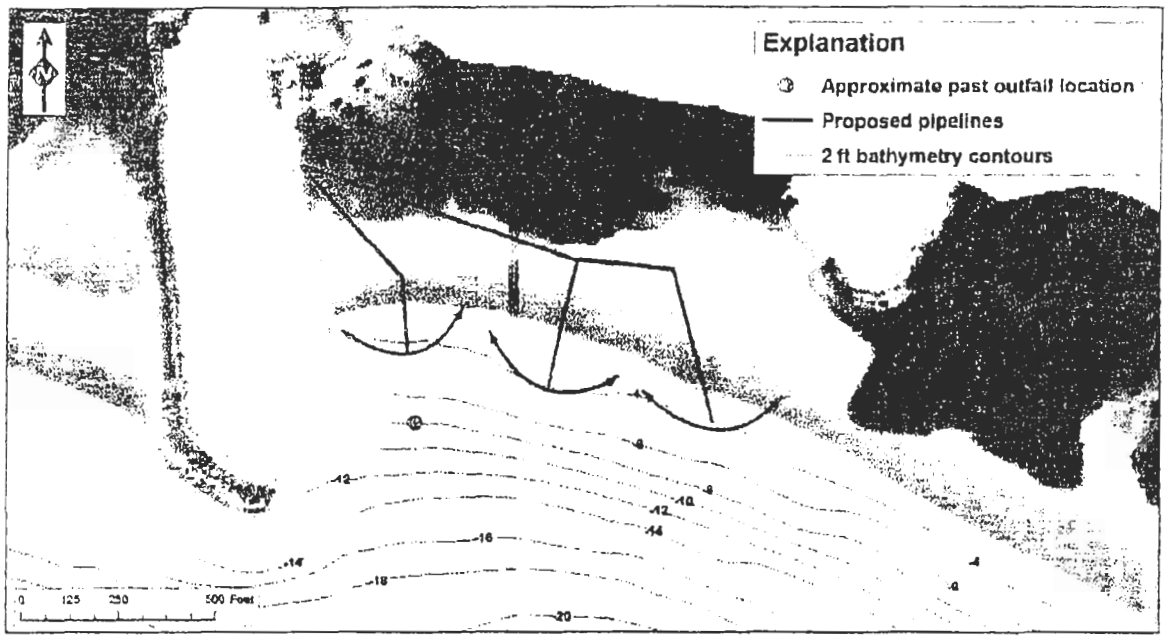

Figure 1. Illustration of the approximate locations for the proposed pipeline configuration.

Inner harbor fine-grained dredging

A series of inner Santa Cruz Harbor dredge monitoring programs spanning over the past five years concluded that no significant changes in sediment sample mean grain-size or silt and clay percentage occurred beyond the range of normal background conditions and that the Santa Cruz Bight is a high-energy coastline that does not support the deposition of silt and clay sized particles (Watt, 2003; SEI, 2005a; SEI 2005b). These conclusions were made when the pipeline outfall was anchored approximate 6 to 8 feet below MLLW.

It is our understanding that during fine-grained inner harbor dredging events, the proposed pipeline outfalls at any of the three locations described in Figure 1 will be extended (but not anchored) approximately 4 to 6 feet below Mean Lower Low Water (MLLW). This will place

EXHIBIT NO. 4
APPLICATION NO.
3-05-065-A2
Pg 1 of 1

Hydrogen Sulfide Nuisance Prevention Protocol

Adopted 10/31/03; Revised 10/18/05

This protocol is adopted to minimize exposure to the public from the release of hydrogen sulfide (H_2S) at levels that constitute a public nuisance. The protocol and its provisions are incorporated into the District Permits to Operate for dredges "Seabright" and "Squirt", and are enforceable through the provisions of Air District Rule 200.

A. Avoidance of beach discharge .
To the maximum extent feasible, the Port District shall discharge dredge sediments with H_2S odor potential under water, outside of the beach zone[1] whenever the wind is onshore.

B. Discretionary beach discharge[2]
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 H_2S monitor shall be operated at a location that is directly downwind[3] from the center of the discharge area[4].

---

[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.

[3] During periods when wind direction is not steady, "downwind" from the discharge area shall be the average direction the wind is blowing as it fluctuates back and forth or which is in the direction of the nearest residences if the wind is entirely erratic.

[4] "The Discharge area" is a line passing through the terminus of the discharge pipe, perpendicular to the wind direction, whose length is marked by the visible surface flow of the

(b) The H_2S monitor shall be operated within a warning zone[5] with the following characteristics:

(1) A semicircle whose center is at the discharge outlet,

(2) Whose arc runs from the surf line to the west clockwise to the surf line to the east, and

(3) Whose radius is at least the distance of the monitor from the discharge outlet.

(c) The H_2S 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.

(d) The H_2S monitor shall be checked for accuracy by performing the zero check every day of operation before beginning monitoring, according to the manufacturer's specifications.

(e) The Port District shall notify the Air District by fax any time it receives an odor complaint, 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.

---

sediment being discharged. If the discharge is under water, the width of the discharge area perpendicular to the wind direction is marked by the visible upwelling of water from the submerged discharge pipe.

[5] "A warning zone" is an area of beach inside which members of the public are advised by the Harbor District of the dredge operation and warned of the possibility of H_2S odors inside the warning zone which could reach levels that might cause discomfort. The warning zone shall be defined by a conspicuous boundary with signage that plainly signals this admonition to public access that would be seen and recognized as such by any member of the public, both adult and child, who would enter the warning zone.. This area represents the region of highest concentrations of any hydrogen sulfide that may be released from the discharge area, and is the area inside of which the Harbor will monitor H_2S concentrations.

(f) Wind instruments approved by the Air District shall be located and operated as follows:

(1) A wind indicator approved by the Air District shall be collocated with the H_2S monitor to continuously provide a conspicuous indication of wind direction, and

(2) A wind instrument 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.

(g) The Port District shall transmit to the Air District by the 10th of each month:

(1) A copy of the H_2S monitor's data output for each day of operation during the preceding calendar month,

(2) The wind instrument's data for the preceding calendar month,

(3) A log recording dredge events for the prior calendar month, 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, and
(iv) If termination was required by H_2S monitor readings, the readings which triggered termination and all subsequent readings recorded by the monitor until they returned to below 15 ppb.

(4) A detailed log of all odor complaints received by the Port District during the preceding calendar month, 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 H_2S monitor records four consecutive readings of 15 ppb gauge or more, or any single reading of 60 ppb gauge or more, or

(b) The H_2S monitor is removed from service.

4. After such termination:

   (a) Beach zone discharge may be resumed when the H_2S monitor is placed back in service.

   (b) Beach zone discharge that is terminated pursuant to 3(a) above may resume the next operating day after the dredge operation is modified to reduce H_2S emissions to allowable levels.

   (c) If beach zone discharge is terminated pursuant to 3(a) above, the H_2S monitor shall continue to operate and record H_2S concentrations until they return to below 15 ppb and remain there for at least 10 minutes.

   (d) If beach zone discharge is terminated pursuant to 3(a) above, the Port District shall immediately notify the District by fax of the termination, including:
      (i) The readings triggering termination and their times, and all subsequent readings recorded by the monitor until they returned to below 15 ppb, and
      (ii) The time beach discharge flow actually ceased.

5. Do not exceed an H_2S monitor rolling one hour average of 30 ppb.

C. Emergency Beach Discharge[6]
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 through B. 2(g) above.

2. Give advance notice as follows:

   (a) Notify the Air District by fax, 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

---

[6] "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 to keep clear, the Harbor channel, and
- the offshore outfall is incapacitated, or
- a public official having responsibility for a public asset declares in writing that immediate beach replenishment is necessary to prevent damage to an asset, such as roads, utilities, or structures.

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 H_2S monitor is removed from service.

4. After such termination, beach zone discharge may be resumed when the H_2S monitor is placed back in service.

5. Do not exceed an H_2S monitor one hour average of 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 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"

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Table 1

North Harbor
Sediment Accumulation Data
May 2005 through February 2006

Area	Sediment Depth (ave, ft, MLLW)	Sediment Depth (ave, ft, MLLW)	Sediment Accumulation Thickness (ft)	Surface Area (ft^2)	Sediment Accumalation Volume ($yard^3$)
North Slips Slips[1]	4.8	3.2	1.6	31,500	1,867
North Slips Channel[1]	6.9	3.3	3.6	33,600	4,480
Channel[2]	10.1	7.7	2.4	195,460	17,374
West Slips North Slips[1]	4.5	4.1	0.4	21,040	312
West Slips North Channel[1]	6.9	3.9	3.0	25,200	2,800
West Slips South[2]	7.4	6.1	1.3	34,717	1,672
East Slips North[2]	7.9	6.0	1.9	31,153	2,192
East Slips South[2]	7.1	5.8	1.3	195,699	9,423
TOTALS				**568,369**	**40,119**

Notes:
ave = average
ft = feet
MLLW = mean lower low water
1 = sediment depth data collected on November 22, 2005 and on January 18, 2006
2 = sediment depth data collected on May 27, 2005 and on February 22, 2006

EXHIBIT NO. 6
APPLICATION NO. 3-05-045-A2
pg 1 of 1

THIS is The amount of SEDIMENT THAT CAME IN LAST WINTER. OUR claim to FEMA is 40,119 cy

September 14, 2006

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COASTAL COMMISSION
CENTRAL COAST AREA

Peter Douglas, Executive Director
c/o Susan Craig
State of California Coastal Commission
Central Coast District Office
725 Front Street, Suite 300
Santa Cruz, CA 95060

RE: Notice of Proposed Permit Amendment
Permit No: 3-05-065-A1
Granted to: Santa Cruz Port District

Dear Mr. Douglas:

Thank you for the opportunity to respond to this Notice of Proposed Permit Amendment. I appreciate being a recipient of this very important information.

The following outlines my objection and comments regarding proposed amendment to Permit No: 3-05-065-A1:

Objection

- NO DREDGING IN OCTOBER

  - October dredging will lessen public access to enjoy the beneficial and recreational uses of a pristine, beautiful, serene environment at Harbor/Twin Lakes State Beach. This precious experience will be reduced to only 5 months out of the year.

  - The Santa Cruz Port District keeps increasing the dredge season; first from 4 to 6 months, and now to 7 months. (For the past two dredge seasons, they have extended the season into May, which would increase it to 8 months out of the year.)

  - The ocean water will be darkened and polluted (even if dredged at night), and will be contaminated with the following constituents from the North Harbor:
    - Sulfides
    - Metals
    - Organic Compounds
    - Butyltins
    - Chlorinated Pesticides
    - Semi-Volatiles

    Metals may be released to the air as particulates or in water droplets. Organic compounds can be transported by volatilization. Any emission to air by volatilization, off-gassing, or release of particulates can affect swimmers, beachgoers and nearby residents or businesses.

CCC Exhibit 7
(page 1 of 29 pages)

Another concern arises if a constituent is present at natural or background levels, and the dredge operation increases the potential for human exposure to that constituent to harmful levels.

- Direct discharge and suspension of North Harbor sediment in the water can also expose swimmers, surfers and beachgoers to contact through:

    - Ingestion

    - Inhalation

    - Dermal Contact
      According to current scientific research, prolonged exposure of the skin, especially under conditions that may enhance dermal absorption (e.g., sunburn) may result in toxicologically significant amounts of certain water contaminants being absorbed.

      When you think about it, we can administer prescriptions via a patch placed on the skin, or rub a medicated gel or lotion on the skin and it will be absorbed.

      How safe is the water for swimming and wading? Shouldn't a sign be posted to warn the public?

- Adverse health effects have been reported to the Monterey Bay Unified Air Pollution Board during North Harbor dredging. Complaints consisted of the following:

    - Metallic taste in mouth
    - Stinging and burning eyes
    - Dizziness and loss of balance
    - Vertigo

As a member of the public, I ask you "why would we want to pollute our water unnecessarily?" It appears that the Santa Cruz Harbor has received funds to truck the North Harbor sediment to an upland site or SF-14. Why not take this year's 10,000 cubic yards to the upland site or SF-14? The benefit does not outweigh the risks.

Thank you for your kind consideration regarding these matters.

Sincerely,

Kathy A. Shortley

Kathy Shortley
P.O. Box 3625
Santa Cruz, CA 95063

CCC Exhibit 7
(page 2 of 29 pages)

COMMUNITY SOLUTIONS USA
5615 26 St. N., Arlington, VA 22207 • Telephone 703.536.7282 • Fax 703.538.5504

September 15, 2006

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SEP 19 2006
CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Mr. Peter Douglas
Executive Director, California Coastal Commission
C/O Susan Craig, Central Coast District
725 Front Street, Suite 300
Santa Cruz, CA 95060

Dear Mr. Douglas:

Re: Objection to Permit Amendment No. 3-05-065-A1 (Santa Cruz Port District)

I object to proposed Coastal Commission Permit Amendment No. 3-05-065-A1, as described in the Notice of Proposed Permit Amendment ("Notice"), dated August 30, 2006. Please report the amendment and all written objections to the Coastal Commission at its next regularly scheduled meeting.

The permit amendment authorizes Santa Cruz Port District ("Port District") to dredge and dispose of an unlimited amount of Santa Cruz inner harbor sediment at an "upland" location, such as the Elkhorn Slough estuary or a landfill in Monterey County. If approved, the amendment also authorizes Santa Cruz Port District to move up the start date for near shore disposal of inner harbor sediment, containing more than 50 percent sand, from November to October.

In principle, I support disposal of sediment dredged in the inner harbor at an upland location (i.e., a landfill or another approved site) or in deep waters of Monterey Bay at the federally-approved site known as SF-14.

However, the Port District proposal for upland disposal of 36, 041 cubic yards of inner harbor sediment fails to take into account adverse environmental and community impacts. Transporting upwards of 1,800 truckloads of sediment through an urban area in Santa Cruz increases traffic congestion, air pollution and energy consumption. Upland disposal of sediment from Santa Cruz Harbor in Monterey County affects their environment and community.

If the Port District chooses to dispose of the sediment at Elkhorn Slough, then evaluation of effects on the estuary is required. Any plan that affects the waters of the United States and wetlands requires separate review and approval by the U.S. Environmental Protection Agency.

The Port District application lacks a schedule for dredging inner harbor sediments, plans for dewatering the sediment and discussion of environmental impacts during dewatering, such as odors from decaying organic matter. Dewatering is more efficient and effective in dry months, which means that the traffic impacts would be during peak tourist months when congestion is already a problem.

It seems appropriate for the Coastal Commission to request that the Port District provide background on its previous experience with upland disposal of inner harbor sediment, including

CCC Exhibit 7
(page 3 of 29 pages)

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the volume of sediment dredged, calendar months when dredging and disposal took place, the upland disposal location and effects on the environment and community.

One way to allow the Port District to begin upland disposal after addressing these issues and to minimize adverse impacts is for the Coastal Commission to limit the volume of sediment dredged in 2006-2007. Limiting the months when dredging for upland disposal can take place would mitigate some impacts.

The Coastal Commission needs to notify residential neighborhoods and businesses in Santa Cruz County and Monterey County about the proposed upland disposal plans.

If the Port District plans to begin dredging the inner harbor for upland disposal after the rainy season ends in Spring 2007, then the delays to address these concerns should not be a hardship. No matter when the Port District intends to begin dredging for upland disposal, it must comply with the intent and specific requirements of the California Coastal Act of 1976.

The proposed permit amendment addresses another issue, authorization to begin dredging inner harbor sediment in October for disposal in near shore waters. I believe there are practical problems, from a regulatory perspective, that will likely delay the start of dredging for near shore disposal. The Port District must submit sediment test results every year for approval by the Coastal Commission, Environmental Protection Agency, Army Corps of Engineers, Regional Water Quality Control Board and Monterey Bay National Marine Sanctuary.

Results of the sediment tests distributed a couple days ago to regulatory agencies may take weeks to review and approve, assuming no issues arise requiring further analysis. That moves a potential start date for inner harbor dredging beyond the beginning of October 2006. The Port District is responsible for any delay due to the last minute submission of test results.

The Port District applied to the Coastal Commission and other regulatory agencies to increase the volume of inner harbor sediment disposed in near shore waters from 10,000 cubic yards in previous years to 20,000 cubic yards in 2006-2007. That proposal is a "material" amendment, which your staff advised me is scheduled for consideration by the Coastal Commission in mid-October 2006.

Finally, the Port District recently proposed another "material" amendment that is the most radical change in sediment disposal in a decade, which would create a new disposal zone at three locations on the beaches in very shallow water. Inner harbor and entrance channel sediment would be disposed much closer to the beach. No scientific studies have been performed to evaluate the environmental issues, particularly health and nuisances effects associated with toxic hydrogen sulfide gas released from the disposal pipeline in these new locations.

Port Director Brian Foss provided speculation and unrelated research rather than sound science in making his last-minute proposal for a new disposal zone. The lack of public consultation by the Port District is bound to create serious problems for all regulatory agencies.

Research concerning results of Demonstration Project II cannot address the impacts of inner harbor sediment disposed in these new locations.

Community Solutions USA objection to proposed Coastal Commission Permit Amendment No. 3-05-065-A1

No data is available to model or assess disposal of heavy entrance channel sediments composed of more than 80 percent sand at several new locations. Entrance channel sediment contains decaying organic matter, which produces hydrogen sulfide.

The California Air Resources Board and the California Department of Health services are investigating enforcement and health issues associated with Santa Cruz Port District dredging operations that release hydrogen sulfide.

My point with respect to the proposed "immaterial" amendment is that allowing dredging and near shore disposal of inner harbor sediments in October is putting the cart before the horse.

Amending several federal and state permits to change the disposal zone is a complex process, raising numerous environmental, scientific and engineering issues. Unfortunately, the Port District made no effort to consult the affected East Cliff community before submitting the proposal in August 2006.

I plan to submit an analysis of the disposal zone proposal to the Coastal Commission and all agencies issuing permits.

From a regulatory perspective, it may be impossible to resolve the disposal zone issue for many months. The permit manager at the Army Corps of Engineers believes the proposed permit amendment requires a "Public Notice" process that normally takes at least several months to complete before the Corps can make a decision.

For all these reasons, I object to the proposed permit amendment and ask that you report the matter to the Coastal Commission in October 2006. Combining the so-called "immaterial" amendment with the "material" amendments is a better way to make an informed decision.

I believe that the Port District must assume the responsibility to provide the necessary information, including steps to mitigate adverse environmental and community impacts in the coastal zone. Please provide a timely written reply in advance of the Coastal Commission meeting in October.

Sincerely,

Lance King

Lance M. King
Chairman

cc: Santa Cruz County Board of Supervisors
Santa Cruz City Council
Brian Foss, Port Director, Santa Cruz Small Craft Harbor
Susan Craig, Coastal Commission
Jim Ryden, California Air Resources Board
Marilyn Underwood, PhD., California Department of Health Services
Clyde Davis, Permit Manager, U.S. Army Corps of Engineers
Brian Ross, U.S Environmental Protection Agency
Peter Von Langen, Regional Water Quality Control Board
Patricia Matejcek, Sierra Club
Surfrider Foundation

CCC Exhibit 7
(page 5 of 29 pages)

Susan Craig

From: patachek@juno.com
Sent: Friday, September 15, 2006 4:27 PM
To: Steve Monowitz; Charles Lester; Susan Craig
Cc: patachek@juno.com
Subject: Santa Cruz Port District Permit Amendment request

September 15, 2006

Peter Douglas, Executive Director
Steven Monowitz, District Manager
State of California Coastal Commission
Central Coast District Office
725 Front Street, Suite 300
Santa Cruz, CA 95060

RE: Notice of Proposed Permit Amendment
Permit No: 3-05-065-A1
Granted to: Santa Cruz Port District

Dear Mr. Sirs:

I appreciate the opportunity to respond to this Notice of Proposed Permit Amendment.
Please consider my comments regarding proposed amendment to Permit No: 3-05-065-A1.

While I understand that the Santa Cruz Port District was established and operates under a federal mandate as a "Harbor of Refuge", I have long been concerned re: the lack of financial and agency oversight on their operations as a "Special District" and their increasing demand on public financial and environmental resources for their continued operation.

As was made clear in a historic photo published recently in the Mid-County Post by historian Carolyn Swift of the Capitola Museum, a photo showing tractors distributing newly-trucked in sand that was required to replenish Capitola's Main Beach - and main economic asset, this condition was created by the wholesale theft of sand resulting from the breakwater for the Santa Cruz harbor.

The armoring requests from property owners that your agency has had to process, as well as the cumulative losses of beach access throughout the area SE of the harbor, through all of Live Oak and Pleasure Point are all a direct result of littoral drift sands being withheld from downcoast beaches. Previously proposed by the Corps of Engineers and now advocated by the county is a more than 1000 ft. seawall for the Pleasure Point area, a project that places at risk the continued viability of the area as a world-famous surf break and center to the multi-million dollar surf industry based in Santa Cruz.

Additionally, the accumulated sand on Castle/Seabright Beach between San Lorenzo Point and the breakwater is progressively occluding the mouth of the San Lorenzo River, impeding the river's ability to transport sand to the Pacific and causing it to accumulate in the channel within the confines of the city of Santa Cruz and reducing its level of flood protection. Millions of public dollars in an additional Congressional appropriation were required to raise the levees in the late 1990's and now additional work is required to provide an adequate level of flood protection to downtown businesses and residents who must currently pay flood insurance.

CCC Exhibit 7
(page 6 of 29 pages)

With the reduction in fishing stocks, the major utility of the Santa Cruz harbor is pleasure craft, not commercial fishing. This use does not require year-round emergency access nor emergency dredging permits.

In my opinion, the five agencies responsible for permitting the maintenance operations at coastal harbors owe it to the taxpaying public to conduct an unbiased, thorough economic analysis of the Santa Cruz Port District on the city, county, state and nation. It appears to me that the economic impacts of a harbor of this size in the former Woods Lagoon outweights the benefits to a small portion of the public and recommendations re: downsizing, breakwater redesign, a sand bypass to restore the billions of cubic yards currently trapped on Castle/Seabright and improved maintenance equipment and procedures would vastly benefit the general public.

While the areas around the 4 harbors within the Monterey Bay National Marine Sanctuary will be exempt from review in the upcoming Sanctuary Management Plan Update, their effects on Sanctuary waters through pollution, dredging and spoils disposal will be eligible for public review and comment. I ask you not to approve the Santa Cruz Port District's requests for additional dredge disposal and time in advance of that document's public process.

Thank you for your consideration.

Patricia Matejcek
PO Box 2067
Santa Cruz, CA 95063

CCC Exhibit 1
(page 1 of 22 pages)

SANTA CRUZ HARBOR
Gateway to the Monterey Bay National Marine Sanctuary

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CALIFORNIA COASTAL COMMISSION CENTRAL COAST AREA

September 29, 2006

Peter Douglas, Executive Director
California Coastal Commission
c/o Susan Craig
725 Front Street, Suite 300
Santa Cruz, CA 95060

SUBJECT: Responses to letters to the Coastal Commission from:

1) ***Lance King, September 15, 2006;***
2) ***Patricia Matejcek, September 15, 2006;***
3) ***Martha Glenn, September 18, 2006,***

objecting to Santa Cruz Port District amendments to Coastal permit 03-05-065-A1 (dredging issues)

Dear Mr. Douglas:

The following are our responses to the above referenced letters:

MR. KING'S LETTER OF SEPTEMBER 15, 2006

Upland Disposal of Inner-Harbor Dredged Material

Harbor sediment can be disposed of using three principal methods:

a) Nearshore Disposal where coarse-grained material can replenish beaches and finer-grained materials travel to deeper offshore areas when adequate ocean energy is present.

b) Deep Ocean Disposal[1] at designated US Army Corps of Engineers / Environmental Protection Agency-managed sites, such as SF-12 and SF-14. In Monterey Bay, this method would be pure disposal, without beneficial reuse aspects.

[1] Deep ocean disposal is not being considered at this time for this Santa Cruz Harbor situation. Limited steelhead fish avoidance windows, combined with limited entrance weather windows for a tug and barge conveyance system, make this option quite problematic given the volume of material to be dealt with.

CCC Exhibit 1
(page 8 of 29 pages)

c) Upland Disposal is a method where sediment is removed and taken by truck conveyance to a landfill or other upland site, where the material is utilized for daily cover fill or other beneficial purpose.

The Port District's proposal, with the current extraordinary volume of material, is:

- 17,522 CY of material for nearshore disposal;
- 34,341 CY of material for upland disposal (approximately 11,000 CY of this material is sand and can be placed on the beach).

We agree with Mr. King that upland disposal has inefficiencies and impacts. Accordingly, we have been espousing the use of nearshore sediment disposal for many years due to its far superior benefits in regard to lower cost, lower fuel use and lower overall environmental impact signature. In pursuit of this technology, the Port District has conducted two scientific, peer-reviewed demonstration projects which confirm the efficacy of nearshore disposal of multi-grained sediment in a high energy wave climate.[2]

Our proposal selects upland disposal for the current situation because we have a great deal of fine-grained material which is less than 50% sand and would not be allowed to be disposed in the nearshore directly at this time.[3]

The specific upland site is not final. We would hope to provide material for the wetland restoration project to be sponsored by the Elkhorn Slough National Estuarine Research Reserve Restoration Project.[4] However, it is uncertain as to the timeframe when all environmental and permit requirements will be complete. So, the feasibility of this option remains clouded.

A second, less attractive option is a landfill. We agree that although it provides daily cover, filling landfills with dredged material is not the best use in terms of limited landfill

---

[2] References:

a) Monitoring Harbor Dredging and Sedimentary Changes in Coastal Habitats of the Santa Cruz Bight, California. S. Watt, G. Greene, PhD, December 2003, Moss Landing Marine Lab.

b) Fall 2005 Inner Santa Cruz Harbor Dredge Disposal Monitoring Program, May 12, 2006. Sea Engineering, Inc. *(Note: A third monitoring program was conducted for February 2005 dredging with identical confirmatory results. June 27, 2005, Sea Engineering.)*

[3] Current EPA / USACOE policy on nearshore disposal is a minimum of 50% sand content.

[4] Elkhorn Slough, some 20 miles from Santa Cruz Harbor, is losing approximately 70,000 cubic yards of wetlands per year to adverse tidal currents and will need ongoing sedimentary material to rebuild and stabilize the estuary.

capacity and the fact that Santa Cruz Harbor's material is clean and quite usable in some beneficial resource application.[5]

The Port District is exploring other upland options that could yield more benefits, such as:

- road base (commercial use);
- other environmental restoration projects, such as the Arana Gulch watershed.

Timing of Dredging

The harbor has, as of this date, lost the use of 19 berths due to shoaling. At least 100 other berths are affected at low tides. The Port District has qualified for FEMA financial assistance to deal with the shoaling. This opportunity needs to be taken advantage of in order to return the harbor depths to a point where they can withstand future winter sedimentation on a cycle that can be less crisis driven.

The plan is to commence upland disposal-type dredging in July 2007, and work through until the end of February 2008. This is commensurate with steelhead fish avoidance windows.[6] Mr. King proposes that dredging volumes be split between 2007 and 2008-09. This proposal is problematic with the harbor's operational and financial issues:

- The FEMA funding program expects a forthright timeframe to correct a recognized disaster;
- Splitting the third-party contract into two, wholly separate mobilizations and demobilizations, will drive the cost well beyond FEMA's authorized estimates, and Port District expenses as well;
- A protracted multi-phase contract will not protect the Port District from subsequent winter shoaling (in 2008), and could exacerbate already shallow conditions;
- Delaying dredging will most likely result in Mr. King requesting a re-testing of sediments due to the protracted time.

Environmental Impacts of Upland Disposal

As Mr. King states, the harbor operation will have air and traffic impacts. However, we believe that these are not going to be reoccurring on the scale we now face:

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[5] Santa Cruz Harbor sediment has never failed its recurring physical, chemical and biological testing regimens. Agency review of 2006 tests pend. Preliminary analysis is consistent with prior years, and no reasons for concern are apparent.

[6] Steelhead (Orkiss Mykiss) are a federally-listed threatened species. National Marine Fisheries Service protects this species by limiting dredging operations during crucial periods.

1) The winter of 2005-06 was extraordinary. We expect yearly upland disposal efforts, in the future, to be on an order of magnitude less, as other mitigations take effect.[7] We can also explore deep ocean disposal when volumes are less than the current problem.

2) Drying material for upland disposal is not dependent on summer weather as Mr. King theorizes. Drying will take place using hydrocyclone technology. Additionally, the process will use linear motion shakers to remove the sand. Sand extracted using this method can be transported by truck to the beach for replenishment. We estimate that approximately 11,000 CY total of this material will be beneficially used in this manner – the other 23,000 CY will be taken to an upland site. This beneficial use is one of the reasons we propose upland disposal as opposed to deep ocean disposal. All sediment is lost in the latter option.

Disposal Zone Issues

Mr. King asserts that a number of wholesale changes are being proposed. Actually the Port District is simply seeking to clarify the beach and nearshore disposal operation that has been taking place for 40 years.

Beach Disposal Above the Water

The Port District has been replenishing sand on its own beach and the State Parks beach (with permission) since 1966. Every part of the beach has been utilized at one time or another from the east jetty to 9th Avenue. The current permit generally allows such disposal for beach replenishment purposes.

Additionally, the Port District has utilized surf-line disposal seaward of the wave run-up line. Current permits allow disposal within a rectangular box from the east jetty to 7th Avenue, and offshore some 200 feet. We are asking for clarification of the language in various permits. We also are attempting to expand the water area for future underwater disposal; however, that awaits Monterey Bay National Marine Sanctuary's authorization process.

Hydrogen Sulfide Control

We agree with Mr. King that this is a very important issue. The Port District has dedicated countless hours and significant capital and expense to control emissions. The proposal to use multiple underwater disposal points is simply a refinement of past operations.

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[7] A restoration plan for the Arana Gulch watershed (the source of sedimentation) is being implemented. The objectives of the 2002 plan are to prevent erosion at its source and reduce the sediment that fills the harbor (Arana Gulch Watershed Enhancement Plan, February 2002.)

The multi-point shore-based disposal will allow the Port District to dispose underwater at nearly all times when there is odor potential. The MBUAPCD Board is in support of the Port District's plan.[8]

We do not denigrate Mr. King's concerns, but his assertion that we are "experimenting" on the public is a severe exaggeration. The reality is that the Port District must comply with a strict Monterey Bay Unified Air Pollution Control District "MBUAPCD" emission standards. The Port District was in 100% compliance in 2005-06, except for one, 5-minute period during emergency conditions, for which we will pay a substantial fine. The Port District has every incentive to comply. We are compelled to experiment in order to improve both hydrogen sulfide emissions and dredging production. The Port District receives no special dispensation from MBUAPCD while it researches methods to address both issues, so the public is protected at all times.

It should be noted that the Port District has no global models to follow in its research. No harbor operation in this country or other, has the peculiar problems and urban juxtaposition of Santa Cruz Harbor. Still, the Port District is determined to accomplish all its missions (safe channel, hydrogen sulfide control, efficient dredging), and we are optimistic about what we propose. The MBUAPCD is supportive of our efforts. But again, we will be given no quarter in regard to meeting emission protocols on a minute-by-minute basis.

Increase of Nearshore Volumes

The Port District desires to increase its ongoing yearly volumes to 20,000 CY of multi-grained character sediment. This is based on the positive findings of many site specific studies, and the beneficial aspects of this option versus other options.

For this year, the Port District is asking for an increase in the volume of the 80% sand segment.

> *Current Conditions:* We have only 2,685 CY of material that is 50% to 79% sand. This volume is within the current 3,000 CY permit amount.

We also have, however, because of the FEMA-recognized 2005-06 storm event, 14,837 CY of 80% sand material. We ask that the 7,000 CY limit on sand be raised for this year, if not on an ongoing basis.

If the increase in volume is not granted, then we will be forced to increase the upland disposal contract by 7,522 CY, to 41,863 CY (7,522 + 34,341). North harbor material does not contain hydrogen sulfide and does not produce offensive odors.

---

[8] See Mr. King's letter to the Monterey Bay Unified Air Pollution Control District and subsequent response by Ed Kendig of the MBUAPCD.

Coarse-Grained Material Request:

We also ask, because of the coarse nature of the most northerly material, that those specific areas be pumped to the surf-line and not through the offshore pipeline. This is requested because those heavy sediments, pumped through the pipeline will shoal it and make it unusable for fine-grained material which must go offshore. All fine-grained material (<80% sand) will be disposed of through the offshore pipeline.

MS. MATEJCEK'S LETTER OF SEPTEMBER 15, 2006

Harbor of Refuge

Ms. Matejcek's comments are without merit. Santa Cruz Harbor is a designated "harbor of refuge" at both the federal and state levels. It does fulfill its mission as a refuge for coastal sailors. What's more, harbor patrol personnel perform more than 100 water rescues per year using the patrol vessels. The U.S. Coast Guard uses Santa Cruz Harbor on a year round basis. Vessel Assist performs several-hundred commercial tows per year.

Ms. Matejcek's assertions that commercial fishing has lessened and more boaters are recreational in nature is wholly without merit – the Port's harbor of refuge function and safety function have equal value to all boaters, commercial or recreational.

Sand Supply

The assertion that Santa Cruz Harbor continues to deplete sand on downcoast beaches 40 years after construction defies science and is not supported by the oceanographic community. Sand impoundment between the river and harbor stabilized in the late-1960's. Winter-long harbor dredging actively replenishes downcoast beaches on an ongoing basis.

Financial Independence

The Port District is completely self-funded for operating revenues. No local tax funds are used. On the contrary, the Port District generates +$800,000/year in taxes for local governments.

Effect on San Lorenzo River

Creation of the harbor in 1962 stabilized cliffs from the river to the west jetty, saving an area that was about to be lost and go the way of Depot Hill in Capitola. There is no scientific study that ascribes to the harbor the problems of the San Lorenzo River. The San Lorenzo River clears itself in storms and the harbor entrance receives sand proportionally. Dredging records for subsequent months and years attest to this phenomenon.

Monterey Bay National Marine Sanctuary Relationship

The new management plan to be adopted by the Monterey Bay National Marine Sanctuary does not change the dredging permit relationship with the harbors in any way. The Sanctuary will maintain its current authority.

MS. GLENN'S LETTER OF SEPTEMBER 18, 2006

Ms. Glenn is a valued neighbor and her concerns are wholly recognized. Our plan is to reduce hydrogen sulfide emissions and produce a better overall product. The plan to have numerous non-anchored, underwater disposal points will allow the Port District to achieve its goal of disposal underwater at nearly all times when there is odor potential. We disagree with Ms. Glenn that toxics are involved with our dredging operation.

The Port District only wants to dispose above the water line when non-organic laden sand is available. This is estimated at less than 10% of the time, with the other 90% being underwater. The current offshore pipe has not allowed the Port to achieve this percentage. A deeper version of the current offshore pipe, as Ms. Glenn suggests, would only worsen the limitations of the deep water concept.

The Port District sincerely desires to solve this problem for Ms. Glenn and all of our neighbors, as well as for the boating community who depend on an operating harbor.

Sincerely,

Brian E. Foss
Port Director

BEF:mo
corres/ccresponse.doc

FOHG.org

Friends Of the Harbor Group

Located at the Santa Cruz Small Craft Harbor
P.O. Box 2711 Santa Cruz, Ca. 95063
www.fohg.org info@fohg.org

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OCT 06 2006
CALIFORNIA
COASTAL COMMISSION
CENTRAL COAST AREA

Permit Amendment #: **03-05-065-A1**
Position: In Favor

October 6, 2006

Peter Douglas, Executive Director
California Coastal Commission
C/O Susan Craig
725 Front Street, Suite 300
Santa Cruz, CA 95060

Dear Mr. Douglas,

The Friends of the Harbor Group is a volunteer organization at the Santa Cruz Small Craft Harbor representing over 435 recreational and commercial harbor users, as well as local harbor residents and businesses. Our mission is to advocate and educate the general public and government agencies on the importance of keeping the Santa Cruz Harbor open and maintaining safe, continual access to the Monterey Bay. We support (1) an environmentally safe and effective sediment removal program and (2) the restoration of the Arana Gulch Watershed in order to reduce sediments entering the harbor.

We understand that the Santa Cruz Port District has filed a permit amendment **03-05-065-A1** in order to clear the inner harbor of sediments deposited by the Arana Gulch Watershed during the 2005/2006 winter season storms.

We ask that the California Coastal Commission authorize this permit amendment as soon as possible for the following reasons:

Protect the economic viability of the Santa Cruz Harbor
Harbor infrastructure is being damaged and many berths have been rendered unusable by the accumulations of Arana Gulch sediments in the upper harbor. Winter storm runoff from erosion sites in the Arana Gulch is quickly reducing the usable navigable area of the harbor. Over 40 berths are already clogged with sediments and many more will be clogged this winter without immediate dredging.

*Considering our harbor has a waiting list with over 1,100 persons waiting up to 15 years for a slip, not allowing our harbor to be maintained in a timely basis should be considered a violation of the Coastal Act sections 30213 and 30234. **

FOHG.org

Friends Of the Harbor Group

Located at the Santa Cruz Small Craft Harbor
P.O. Box 2711 Santa Cruz, Ca. 95063
www.fohg.org info@fohg.org

The Santa Cruz harbor is already at a critical condition due to the large sediment load received during the 2005/2006 rainy season. Conditions this year were so severe that FEMA has approved disaster funds for the removal of these sediments. To delay this season's inner harbor dredging could have dire consequences for the operation of the Santa Cruz harbor.

Volume of sediment to be dredged is very small percentage (1-3%) of the volume of San Lorenzo sediment deposited only 3000 feet from the harbor entrance

As a comparison, the volume of sediments requested by the dredging permit represents only 1-3% of the volume of silt and clay deposited annually by the San Lorenzo River into the near-shore environment near the harbor entrance. The depositing of large volumes of silt/clays into this near shore environment is already a naturally occurring process due to the San Lorenzo River. Furthermore, the 2001, May 2005 and October 2005 studies performed by Moss Landing Marine Laboratory and Sea Engineering Inc. have validated that there are no negative impacts.

All scientific studies performed confirm no adverse impacts

Dredging permit opponents typically state that there has been inadequate testing of the sediments to be dredged. These claims are groundless based on the following environmental studies:

a) Moss Landing Marine Laboratories 2001 and 2005 Near shore Sediment Transport Studies. No adverse impacts noted
b) Santa Cruz Port District. Extensive Tier 1/2/3 Sediment testing per EPA and ACOE requirements, all tests passed.
c) Sand Crab Chemical Analysis for Regional Water Quality Control Board. No adverse affects to sand crabs noted in post-dredging tests.
d) October 2005 inner harbor demonstration project. No adverse impacts noted by Sea Engineering, Inc.

Widespread community consensus and support for this project

The Friends of the Harbor Group and all harbor users are expecting that the inner harbor dredging will be completed this year as originally planned. There is widespread support from the community and also from federal, state and city officials. Congressman Sam Farr, the City of Santa Cruz, and the State Parks Department have all supported the inner harbor dredging demonstration projects proving that the near-shore is able to accept the Arana Gulch sediments with no adverse impacts.

We see no merit to his claims by Lance King and ask that your agency approve the permit amendments requested by the Port District. To delay this year's inner harbor dredging based on the unsubstantiated claims of an Arlington, Virginia based

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www.fohg.org info@fohg.org

organization with no known members, other than Mr. Lance King himself, does a great disservice to the Santa Cruz community.

We thank you for your consideration.

Sincerely,
Lorenzo Rota, President
Friends of the Harbor Group
POB 2711
Santa Cruz, CA 95063
www.fohg.org

***Coastal Act Sections pertaining to protection of harbor space and facilities**

Coastal Act Section 30213: *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

Coastal Act Section 30234: *Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded. Existing commercial fishing and recreational boating harbor space shall not be reduced unless the demand for those facilities no longer exists or adequate substitute space has been provided.*

Community Solutions USA
5615 26th Street N., Arlington, VA 22207 * Tel 703.536.7282 * Fax 703.538.5504

October 4, 2006

Mr. Peter Douglas
Executive Director
California Coastal Commission
725 Front Street, Suite 300
Santa Cruz, CA 95060

Dear Mr. Douglas:

Re: Santa Cruz Port District Response to Objections to "Immaterial" Permit Amendment No. 3-05-065-A1 and Need for Public Comment Period on Any "Material" Amendment

The Santa Cruz Port District response to objections to proposed Coastal Commission Permit Amendment No. 3-05-065-A1 leaves important questions unanswered. Based upon the response to objections by Port Director Brian Foss in his response letter of September 29, 2006, it is clear that there is no immediate need for the California Coastal Commission to act on the proposed "immaterial" permit amendment.

As I stated in my previous letter objecting to the proposed "immaterial" permit amendment, I support upland disposal for most or all of the sediment dredged in the inner harbor. However, Mr. Foss failed in his permit application and response to address specific adverse impacts regarding coastal access, traffic congestion in the peak tourist season and air pollution.

The proposed "immaterial" permit amendment would also move up the date for starting annual dredging from November to October. In his response to objections, Mr. Foss says nothing about the need to move up the start date for dredging. Changing the start date is a moot issue in 2006. The starting date for dredging is a decision the Coastal Commission should consider when it takes up the "material" amendment, which would create a new disposal zone and double the volume of inner harbor sediment disposed in near shore waters.

Upland Disposal of Inner Harbor Sediment

1. **No need to act now:** Port Director Brian Foss states "The plan is to commence upland disposal-type dredging in July 2007, and work through until the end of February 2008." That statement shows there is no need to act now on the proposed permit amendment that would allow unlimited dredging in the inner harbor for upland disposal.

2. **Coastal access and environmental impacts not addressed by Port District:** Mr. Foss acknowledges that there will be adverse impacts from upland disposal, but fails to address the specific problems. Transporting up to 1,800 truckloads of sediment through residential and business neighborhoods will create traffic congestion and air pollution in Santa Cruz and Monterey Counties.

   Starting the dredging project in July 2007 affects traffic congestion and beach access during the peak of the summer tourist season in Santa Cruz. Tourists

and local residents already face serious traffic congestion in summer months on roads from the harbor to Highway 1, when more people visit area beaches than at any time of the year. Hundreds of thousands of tourists visit Santa Cruz in summer months, which is many times the number of people living in the city.

Air pollution will increase at the harbor from the trucks' diesel engines idling while waiting for loads of sediment. Trucks stuck in traffic will increase pollution in the congested urban environment.

3. **Public participation in Coastal Commission decision-making regarding the permit amendment:** The Coastal Act requires the Commission to encourage public participation in matters affecting the coastal zone. While the Commission mailed the notice about the proposed amendment to 42 addresses, thousands of residents and businesses affected by upland disposal were never given the opportunity to comment on the proposed amendment.

Moving authorized dredging start date from November to October

The Port District proposal to begin dredging in October is a moot point for 2006. Any adverse environmental impacts of moving up the authorized dredging start date are directly linked to decisions the Coastal Commission must make regarding the proposed "material" amendment for a new beach disposal zone and the proposal to double the volume of inner harbor sediment in near shore waters.

Lack of public participation in decision about the proposed "material" amendment

To the best of my knowledge, no member of the public has received a copy of the proposed "material" permit amendment and analysis by staff of the Coastal Commission. The impact of the proposed new disposal zone affects coastal access to two public beaches and may increase public exposure to toxic hydrogen sulfide gas.

With the regularly scheduled Coastal Commission meeting beginning a week from today, the process denies the public an opportunity to participate in the decision-making process for the proposed "material" permit amendment. You provided 10 business days for the public to comment on the proposed "immaterial" amendment. Even if the staff recommendation on the proposed "material" amendment becomes available today, there would only be five business days before the Coastal Commission meeting begins and no real opportunity to affect the staff recommendation.

I requested that Coastal Commission staff provide a copy of your proposed "material" amendment and staff analysis, but have not yet received these materials. In addition, weeks ago I requested the opportunity to talk with Coastal Commission staff about the proposed "material" amendment. My calls and e-mails in this regard have gone unanswered. Therefore, I request that the Coastal Commission postpone action any proposed "material" permit amendment until the meeting in November 2006.

Sincerely,

Lance M. King
Chairman

Susan Craig

From: Martha Glenn [marthaglenn1@yahoo.com]
Sent: Friday, October 27, 2006 1:00 PM
To: Susan Craig
Subject: Proposed Harbor Permit

Dear Ms. Craig,

I would again like to voice my concern over the proposed dredging permit.

The current proposal allows for the continuing pollution of Twin Lakes beach and the surrounding neighborhood. There are many ways the current dredging operation pollutes each year.

The dredge materials that are dumped on the beach, pollute the air as well as the beach. The diesel fuel from the dredging equipment pollutes the air. An employee from the MBUAPCD told those of us in the neighborhood that the diesel exhaust from the dredge is equal to five semi-trucks idling at the beach all day. So not only are we being exposed to H2S and other toxins, but also highly carcinogenic diesel fuel.

If anyone from your organization lived what we live each and everyday during the dredge season you would be appalled. They pollute daily, harass the neighbors directly and indirectly through their FOHG group and generally create a toxic environment.

Someone needs to gain some perspective on this issue. The Santa Cruz Harbor is a small craft harbor. There is no need to allow this toxic environment to continue and gamble with people's health and well being. The risk that is being taken is not in the interest of everyone. It is the interest of a few.

Please do not allow this to continue the way that it has. My health as well as many of my neighbors has been affected. I am a Respiratory Care Practitioner and well understand the affects of H2S on the cardiovascular/pulmonary systems. When I'm breathing H2S and diesel fuel all day it's not a healthy environment.

Please stop allowing our coast, beautiful beach, and people to be polluted. I would ask you to not email my letter to the harbor or their FOHG group. This results in harassment and makes me a target.

Sincerely,
Martha Glenn

Get your own web address for just $1.99/1st yr. We'll help. Yahoo! Small Business.

Exhibit 1
(page 20 of 29 pages)

October 28, 2006

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COASTAL COMMISSION
CENTRAL COAST AREA

Peter Douglas, Executive Director
c/o Susan Craig
State of California Coastal Commission
Central Coast District Office
725 Front Street, Suite 300
Santa Cruz, CA 95060

RE: Santa Cruz Port District Proposal for Multi-Pipe Nearshore Disposal

Dear Mr. Douglas:

After reviewing the Santa Cruz Port District's application for modification of the offshore anchored pipeline to an unanchored multi-pipe nearshore dredge sediment disposal zone, I have the following comments:

This proposal is a huge step backwards and is basically the same nearshore disposal area used for decades, prior to the installation of the anchored offshore pipeline in 1997-98.

Since 1987, I have resided directly across the street from Twin Lakes Beach, which has been the primary disposal area for the harbor dredge spoils.

The effects from the dredge material and the foul odor has kept many beachgoers and neighbors away from enjoying this beautiful beach for decades. When I purchased my home in 1987 there were many active neighbors and beachgoers complaining to the harbor without any satisfaction.

In 1995-96 it got so bad that I purchased a property on the other side of the harbor and moved. Many people made complaints and a petition for clean air was circulated on the beach and at the harbor businesses resulting in approximately 100 or more signatures.

This resulted in multiple notices of public nuisances and, in 1997-98 the offshore pipeline was installed to mitigate the hydrogen sulfide problem. It made a huge difference.

Therefore, I built a new home and moved back, relying on the Air Board and the Coastal Commission continuing to require the anchored offshore disposal.

In 2003-04 the anchored offshore pipeline was used approximately 90% of the time according to Brian Foss. He also stated publicly that he would continue to use the anchored offshore pipeline to mitigate the problem and that the dredging operation was able to keep the channel clear to the depths required using this offshore anchored pipeline. The harbor/Twin Lakes beach was sufficiently replenished with sand.

It was also noted in 2003-04 by many watermen and residences down coast to Capitola that significantly more sand was deposited on the down coast beaches during that season due to the anchored pipeline disposal near the littoral drift.

The Coastal Commission has represented to several potential buyers and residents that the anchored offshore pipeline would remain and was the best solution for the pollution problem at Twin Lakes Beach.

Several individuals wrote to Susan Craig at the Coastal Commission and other agencies with their concerns.

One example is a letter dated September 19, 2005 (see attached), which stated:

"My husband and I are in contract to purchase property at 2631 East Cliff Drive, which is directly across the street from the beach where the SC Harbor discharges its dredge material. We have two small children, and we are concerned about the safety of the air at this location."

Susan Craig responded by email on July 30th 2004, stating:

"I attended a meeting yesterday with the Port District representatives and various other governmental agencies and concerned citizens regarding the Port District's dredging operations. For the upcoming dredge season (which starts in November) the Port district intends to use the offshore pipe (located approximately 70 yards offshore) for its dredge material disposal, instead of putting the dredge material directly on the beach. This should adequately address the hydrogen sulfide issue."

The on beach and nearshore discharge of this dredge material discourages the public from enjoying Twin Lakes State Park Beach. The constant disruption of the tractor running back and forth on the beach and multiple pipes to maneuver around or over greatly disrupts quiet enjoyment and beneficial uses of the this beach. In addition, the tractor cannot push the pipes to sufficient depths offshore to mitigate the foul odor and effects. That is why the anchored offshore pipe was required a decade ago.

A typical example of how beachgoers are interrupted from quiet enjoyment at the Twin Lakes State Park Beach during dredging is stated in a letter dated March 11 2003 (see attached) **(Note: On that particular day, the pipe was pushed by tractor into the surf zone as is proposed in the current application of the Port District):**

"This morning my infant son and I visited the beach adjacent to the Santa Cruz Yacht Harbor. There was a strong foul, toxic odor coming in from the water, which gave me a headache, made me nauseous and made my son lethargic. The water was almost black and was clearly the source of the noxious gas. With the strongest odor coming in near the big black pipe leading into the water from the harbor dredging machine...I will not visit the beach, the harbor or patronize any of the businesses while the dredging is taking place."

The Coastal Commission should protect and encourage the use and enjoyment of this beach as well as other beaches in California.

The anchored offshore pipeline mitigates the hydrogen sulfide problem when the pipe is in deep enough water.

Multiple pipes are a good idea, but should be anchored even further offshore than before. If the Santa Cruz Port District cannot do the job, they should look to outsourcing the dredging to professional companies who can, and get out of the dredging business. There are such companies available that travel up and down the coast to dredge various harbors.

The Coastal Commission and the other permitting agencies need to encourage the Santa Cruz Port District to develop a long-term solution to this problem, which will greatly benefit all for decades to come.

Sincerely,

Richard Rivoir
P.O. Box 4046
Santa Cruz, CA 95063

Board Members
Monterey Bay Unified Air Pollution Control District
24580 Silver Cloud Court
Monterey, CA 93940

September 19, 2005

Dear Board Members,

Last week, the Santa Cruz Port District was installing a beach disposal pipe in front of my home on East Cliff Drive. **I was appalled that you would allow this to take place again**. It was my understanding that you were requiring these pipes to only discharge offshore to stop the air pollution problem.

Last summer, my wife and I purchased a property on East Cliff Drive, adjacent to Twin Lakes Beach. During escrow in July 2004, we emailed all of the agencies involved and were assured that we would not be exposed to hydrogen sulfide and other air pollutants. **All of the agencies appeared to be relying on your agency to resolve the problem.**

The following is an example of the correspondence we sent to each agency:

> "My husband and I are in contract to purchase property at 2631 East Cliff Drive, which is directly across the street from the beach where the SC Harbor discharges its dredge material. We have two small children, and we are concerned about the safety of the air at this location.

Susan Craig at the Coastal Commission responded be email on July 30, 2004, stating:

> "I attended a meeting yesterday with the Port District representatives and various other governmental agencies and concerned citizens regarding the Port District's dredging operations. For the upcoming dredge season (which starts in November) the Port District intends to use the offshore pipe (located approximately 70 yards offshore) for its dredge material disposal, instead of putting the dredge material directly on the beach. This should adequately address the hydrogen sulfide issue."

My family experienced adverse health effects several times throughout this last dredging season. On President's Day weekend, we were sitting outside the coffee shop at the Harbor O'Neill Building with others and several of us experienced burning eyes and headaches. We later found out that they were dredging the upper harbor during that weekend.

- **These emissions unreasonably interfere with the comfortable use and enjoyment of life and property.**
- **You are all elected officials who have the public relying on you to protect them.**
- **Continuing to allow beach disposal will likely result in a highly visible legal action requiring your agency to do its job.**
- **Your agency has the ability to resolve the problem by requiring the disposal pipes to be placed far enough offshore to eliminate any hydrogen sulfide exposure.**

Thank you for your time a consideration regarding this matter.

Sincerely,

Todd Hill
750 University Avenue, Suite 150
Los Gatos, CA 95030

March 11, 2003

Dear Ed Kendig of the Monterey Bay United Air Pollution Control District,

This morning my infant son and I visited the beach adjacent to the Santa Cruz Yacht Harbor . There was a strong foul, toxic odor coming in from the water which gave me a headache, made me nauseous and made my son lethargic. The water was almost black and was clearly the source of the noxious gas. With the strongest odor coming in near the big black pipe leading into the water from the harbor dredging machine. We were approached by a resident who lives nearby and were told that the odorous gas was toxic and the you (the MBUAPCD) were aware of this problem and did not see it necessary to notify the public with a warning sign that beach visitors and especially children would be exposed to a toxin as a result of visiting the beach during harbor dredging operations. I will not visit the beach, the harbor or patronize any of the businesses while the dredging is taking place. Luckily, we have many clean beaches here in Santa Cruz County to visit. I will also tell my friends of the toxic gas and the failure to notify the public.

When I got home I called and registered a complaint with my local MBUAPCD person David Frisbey. He was very polite and told me that you were in fact "looking into" this problem and that the gas was simply a "public nuisance" and not a health threat. I question this response as clearly my headache, nausea and son's concerning lethargy was a health threat for us. I feel it is your responsibility to notify the public of any possible contamination hazards. Please do your job so that we may visit our local beaches without concern for our health. Thank You

Sincerely,
Lisa Rispaud
1925 Avenue #93
Capitola, CA 95010

Exhibit 7
(page 25 of 29 pages)

COMMUNITY SOLUTIONS USA
5615 26 St. N., Arlington, VA 22207 • Telephone 703.536.7282 • Fax 703.538.5504

November 1, 2006

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COASTAL COMMISSION
CENTRAL COAST AREA

Mr. Peter Douglas
Executive Director, California Coastal Commission
C/O Susan Craig, Central Coast District
725 Front Street, Suite 300
Santa Cruz, CA 95060

Dear Mr. Douglas:

Re: Proposed Permit Amendment No. 3-05-65-A2 (Santa Cruz Port District)

Request: I propose that the Coastal Commission withhold action on proposed Permit Amendment No. 3-05-065-A2 until January 2007.

Important new scientific and medical information emerged since the Coastal Commission approved the Santa Cruz Port District dredging permit last year. The information deserves scrutiny by the Coastal Commission and consultation with state agencies engaged in an interagency health and enforcement investigation.

For reasons outlined below, I request that the Coastal Commission direct staff to:

(1) Consult with key states agencies engaged in the investigation;
(2) Require the Port District to provide scientific and engineering research to support the application for modification of the disposal system; and,
(3) Investigate false and misleading information provided by the Port District to the Coastal Commission and other regulatory agencies.

Impact on the Port District of delaying action on proposed permit amendment:

Current state and federal permits allow the Santa Cruz Port District to begin dredging in November 2006 and continue through April 2007. The Port District plans to begin North Harbor dredging next week. Entrance channel dredging will commence in December 2006, according to the California Air Resources Board.

The Port District told the Coastal Commission that dredging the inner harbor (north and south) for upland disposal would begin in July 2007.

Delaying action on the proposed modification of the disposal system on Twin Lakes State Beach and harbor beach should not be a significant problem. The Port District can still utilize the anchored offshore disposal pipeline that became operational in November 1998.

Disposal through the anchored offshore pipeline is the most effective means to mitigate hydrogen sulfide pollution. Port District records state that the offshore pipeline worked well in 6 of the last 8 annual dredging cycles.

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Delaying action on proposed Permit Amendment No. 3-05-65-A2 will not pose an undue hardship, particularly when weighed against obtaining scientific and health results from the current interagency investigation.

Reasons to delay action on the proposed permit amendment:

A. **New scientific and medical information**

- At the request of Santa Cruz County Environmental Health Services, the California Department of Health Services (DHS) began a risk assessment regarding hydrogen sulfide exposure in Santa Cruz. DHS expects to complete its health risk assessment very soon and make public by mid-December 2006.

- In response to public complaints, the California Air Resources Board (CARB) initiated an interagency investigation in 2006. CARB plans to launch an intensive, two-month hydrogen sulfide monitoring program in December 2006, outside a residence where children are exposed to the toxic gas during dredging operations.

- Medical examination of 5 individuals by Dr. Kaye Kilburn in 2005 revealed 4 people have neurobehavioral abnormalities and 3 have cardiopulmonary impairment, which he attributed to hydrogen sulfide exposure when Santa Cruz Port District dumps dredge spoils on the beach or in near shore waters. Kilburn is an expert neurologist and professor of medicine at the University of Southern California, until he recently retired.

- In light of the medical examinations, Dr. Kilburn concluded that it is unsafe to continue beach disposal and that disposal through the underwater pipeline should be moved farther offshore.

- Community Solutions USA plans to release results of a 30-month health and environmental investigation before the end of the year. Research included review of hundreds of complaints lodged since 1997, review of three years of hydrogen sulfide monitoring data that the Port District records to comply with the MBUAPCD's "Hydrogen Sulfide Nuisance Prevention Protocol" (Protocol), review of the MBUAPCD reports from its field investigator, hundreds of interviews, review of all permits, participation in numerous public meetings and in the permit approval process of various state and federal agencies.

B. **Inaccurate, inconsistent and incomplete information from the Port District**

- No scientific or engineering research was provided to the Coastal Commission or any other regulatory agency to support the Port District assertion that an unanchored disposal pipeline in shallow near shore waters would effectively mitigate toxic hydrogen sulfide pollution.

- Santa Cruz Port District previously told the Coastal Commission in the Demonstration Project II proposal that the anchored offshore pipeline is deeper in

the water than it now claims. No research has been performed to support the assertion Port District's claim in the proposed amendment.

- In 2003-2004, the Port District claims it used the anchored offshore pipeline 90% of the time, which reduced hydrogen sulfide emissions. During meetings with regulatory agencies, affected members of the public and environmental leaders in May 2004 and July 2004, the Port District said it achieved the beach nourishment goal.

- In 2004-2005, the Port District used the offshore pipeline 50% of the time, even though it could have terminated beach disposal or shifted to offshore disposal after receiving complaints and recording hydrogen sulfide emissions frequently exceeding the Nuisance Prevention Protocol standard and the California health-based standard on 5 days. Lax enforcement of the Protocol by the MBUAPCD resulted in excessive pollution for several months.

- Winter storms in 2005-2006 were the worst in twenty years, according to Santa Cruz Port District. The harbor entrance channel was closed for three weeks, even though the Port District dredged up to 7 days a week and was authorized to exceed the California health standard in January 2006.

- In extreme weather conditions such as those in 2005-2006, the proposed unanchored pipeline moved to three locations on the beach would be ineffective. The Port District acknowledges the limitations of the proposed system in its August 2006 proposal to the Coastal Commission and other agencies.

- The Port District violated the Emergency Variance from the MBUAPCD on January 9, 2006, the same day the variance was granted. Santa Cruz Port Director Brian Foss misled the Coastal Commission recently in writing, stating that dredging only exceeded standards for "several" minutes. The facts contradict the claim by Mr. Foss. Dredging continued for nearly a half hour after exceeding the pollution limit and only stopped after a public complaint led the MBUAPCD field investigator to tell the Port District to shut down.

- Santa Cruz Port District exceeded the MBUAPCD Protocol pollution limits on 42% of the days it utilized beach disposal in 2004-2005. It "busted" the one-hour California Ambient Air Quality Standard (30 ppb average) on 5 days or 13% of the time during beach disposal. MBUAPCD took no enforcement action because the Port District exercised an interpretation of the Protocol that was "never intended" but appeared to exploit a loophole, according to the MBUAPCD.

- Santa Cruz Port District mislead regulatory agencies about the excessive levels of pollution in 2004-2005 (see May 2005 report) and never mentioned exceeding the state health standard (see Community Solutions USA "Analysis of Monitoring Results and Complaints for 2004-2005").

- Port Director Brian Foss told the MBUAPCD and other agencies in May 2005 that he would work with neighbors on implementation of a new disposal system.

The Port District never informed neighbors or other interested parties about the proposed unanchored pipeline disposal system it wants the Coastal Commission to approve in the permit amendment.

- With respect to dredging of the North Harbor for upland disposal, the Port District failed to address adverse environmental impacts it identified in seeking approval last year for Demonstration Project II. The proposed amendment would result in more than 2,700 truck trips in peak tourist months, creating traffic congestion affecting coastal access and many more adverse impacts. Port Director Brian Foss provided incomplete information to Coastal Commission staff and ignores his own critique of upland disposal in 2005.

C. Inadequate public participation in decision-making about the proposed amendment

- Santa Cruz Port District never consulted interested parties about the proposed permit amendment, parties including residents, beachgoers, surfers and environmental organizations.

- The California Coastal Commission staff report is not yet available to the public. It was impossible to provide informed comments before preparation of the staff analysis and recommendation to Coastal Commissioners.

- Community Solutions was denied the opportunity to meet with Coastal Commission staff, a request to you in my letter last month.

Conclusion:

The Coastal Commission needs to achieve the intent of the Coastal Act by requiring the Port District to substantiate claims about the impact of the proposed permit amendment. Consultation with DHS and CARB is important before acting on the proposed amendment.

Coastal Commission staff need to assure adequate public participation before the amendment is considered in a public hearing. Affected members of the community have no paid staff and it would be a major hardship for them to participate in the November 2006 meeting.

Thank you for giving immediate attention to my request and the reasons for postponing action on the proposed amendment.

Sincerely,

Lance King

Lance M. King
Chairman

cc: Susan Craig, Coastal Commission

CCC Exhibit 7
(page 29 of 29 pages)

See Exhibit 7A (next page) for more correspondence

October 31, 2006

Susan Craig
California Coastal Commission
725 Front Street, Suite 300
Santa Cruz, CA 95060

SUBJECT: Responses to e-mail to the Coastal Commission from Lance King of October 30, 2006, objecting to Santa Cruz Port District amendments to Coastal permit 03-05-065-A1 (dredging issues)

Dear Susan:

The following are brief responses to items addressed in Mr. King's e-mail to the Coastal Commission of October 30, 2006:

Hydrogen Sulfide Control

- Air emissions are regulated by the Monterey Bay Unified Air Pollution Control District, not the Corps of Engineers; not the Coastal Commission; not the California Regional Water Quality Control Board; not Monterey Bay National Marine Sanctuary.

- The hydrogen sulfide permit protocol is a performance standard.
  15 ppb for 4 minutes; or,
  1 each spike of 60 ppb.
  Shut down for the day if any of the above are reached (or switch to offshore disposal).

- Port District shut down 34 times in the 2005-06 dredging season when trigger levels were reached. No dredging took place the rest of those days since the offshore pipe was deemed unusable.

- The Port District did exceed an emergency variance standard one time, on January 9, 2006, and is paying a substantial fine as a result. No other exceedences occurred in the 2005-06 dredging season.

- The offshore pipe is still an option with the Port District operation. The offshore pipe was used seldom in 2005-06, because:

    1. Adverse currents were refilling the federal navigation channel with disposed material. The average depth in the disposal area was only 6' or less because of the tendency of the disposal area to mound with coarse sand.
    2. The offshore pipe was continually plugging and burying itself.
    3. Clearing operations by the dredge crew using the work tender "Dauntless" was dangerous and an unacceptable risk (see picture).

- The proposed "under-surf" disposal system is intended to eliminate the problems experienced by the offshore pipeline (items #1 - #3, above) and be usable 80% to 90% of the time, thereby resulting in an overall better product (a lower overall average hydrogen sulfide product).

- The Port District would have used the offshore pipe if it could have. Dredging operations shut down 34 days last year for the whole day, losing valuable production time. So there was every incentive to go offshore and continue dredging. We did not, because we could not. There were technical and safety problems we could not overcome.

  The proposed disposal system is designed to overcome past obstacles; keep the harbor in daily production; and, deliver a low emissions product.

- By achieving a consistent product we will ensure a safe navigation channel and thus, there will be no need to declare an emergency where high hydrogen sulfide emissions would be allowed.

- The Port District has every incentive to keep its disposal pipe underwater and stay in production.

- Mr. King does not understand that the disposal area for the offshore pipe disposal site is at the -10 to -12 MLLW point on the NOAA hydrographic navigation chart 18685. The actual depth during dredging operations will always be less because we have at times, placed 50,000 to 150,000 cubic yards on the same spot. The sand pipe builds on the bottom and rises in all but the highest surf.

The surfable, breaking wave "Murph Bar" at the disposal pipe is a recreational surf spot precisely because a high "node" is created by the mounding sand.

The fact is the area of deposition has always been in a range from 3 feet to 8 feet, depending on wave energy. Simply put, the sand mound is dynamic. It varies with disposal volume and wave energy.

The current anchored offshore pipe cannot move laterally, only up and down. The proposed underwater pipe can be moved to deeper water at will by mechanically withdrawing it from the shore and replacing it seaward.

Health Assertions

The Department of Health Services will comment on health issues vis-à-vis Santa Cruz Harbor's dredging operation and hydrogen sulfide emissions. Meanwhile, the Monterey Bay Unified Air Pollution Control District has confirmed that no change in the current hydrogen sulfide protocol will be made in regard to the shut-down protocol because the existing criteria is protective of the public.

The Port District will comply with the hydrogen sulfide protocol as it did in 2005-06.

Dr. Kilburn

We do not lightly regard or denigrate any health assertions. The Port District is dedicated to improving its overall hydrogen sulfide emissions product. The proposed disposal design has that as its major objective – a consistently low emissions product with the intent of avoiding all emergency conditions.

Increase in Volumes of Inner-Harbor Material Disposal in the Nearshore

The current Port District proposal is to increase the volume of sand (80% or greater).

The Sea Engineering firm has commented on the proposed disposal zone and its effect on sand, silt, and clay distribution. The basic conclusion is that no distribution change will occur with the proposed "under surf" disposal. No new studies are required. The oceanographic bathymetry and current pattern of the Santa Cruz bite is well known from many studies (see reference, Santa Cruz Harbor Demonstration Dredging Project I, 2002; and Demonstration Dredging Project II, 2005, Also see attached Sea Engineering, Inc. report [8/14/06]).

The environmental impact of sediment dredged and delivered to upland sites is admittedly larger than those for material dredged and disposed into the nearshore. There is also a greater benefit with nearshore disposal than can be calculated. It is within this logical framework that we have, in various documents over an extended period of time, advocated for liberalization of nearshore disposal criteria and volumes.

The proposal to take 34,000 CY to upland sites starting in July 2007, is driven by:

1. the need to clear the harbor;
2. regulations that prohibit nearshore disposal of material <50% sand in all cases, and <80% sand in most cases.

Upland disposal is the only option here.[1] While there are truck traffic and truck emission impacts, we believe they are small in the larger traffic flow of the area. We do not expect to repeat this volume of upland disposal for quite a number of years. We would hope that erosion control programs in Arana Gulch and liberalized nearshore disposal permits will make such an upland disposal effort unnecessary in the future.

Sincerely,

Brian E. Foss
Port Director

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[1] At this point, offshore disposal at SF-14 is not feasible because the weather and steelhead avoidance window is only 12 weeks long.

No study has proven offshore disposal as better environmentally than upland by any magnitude. Additionally, SF-14 provides no recognized beneficial use at this time.

John Hansen, PhDc
250 Bel Marin Keys Blvd, Ste F300
Novato, CA 94949
November 1, 2006

Susan Craig
State of California Coastal Commission
Central Coast District Office
725 Front Street, Suite 300
Santa Cruz, CA 95060

Re: On-beach disposal of dredged materials at Santa Cruz Harbor.

For over 40 years I have been professionally studying, analyzing, and pondering our environment. The last 20 years I have focused more on our internal environment—physiology, biochemistry, and toxicology. The prior 20 years I spent in the external environment, mostly marine ecology, chemistry, geology, and toxicology. One of my most profound understandings over the years is that any aspect of our environment is far easier to understand and manage when thought of it as a living thing.

I don't mean just a place where many organisms live and interact. Albeit this perspective is important, too, it is way too easy to get lost in the details and lose perspective of the management you are trying to accomplish. I mean to more literally view it as a living being.

For example, try viewing the Santa Cruz Harbor as an actual living entity. It's a very dynamic place, always in motion, stuff goes in, energy is exchanged, and stuff goes out, continually—just like any other organism. At every stage of the process, everything is either a waste product or a resource for some other stage—again, just like any other organism. But here's where it gets a little tricky.

As a (please excuse the...) crude analogy, if you grab some fruit off the fruit stand and have yourself a snack, you take the fruit into your body, process it—remove the nutrients and energy—and the next day, presto—it reappears, but in a form that you wouldn't consider putting back on the fruit stand—right? But it is a resource for some other part of the environment.

Now consider the living harbor—by littoral drift and winter storm—consuming some nice clean beach sand. It goes into the harbor, is processed—exchanges nutrients and energy—but now, like the piece of fruit, it's not the same nice clean sand that just entered the harbor. Does it belong back on the beach? Here too, it eventually does, but certainly not directly.

The sand is indeed a resource, and the changes in the sand that occurred in the harbor are also resources, but not for the beach. Another part of the system must process the material before the sand is suitable to be returned to the beach.

Back to the analogy...What would happen if you did put the "processed" fruit back on the fruit stand that it came from just the day before? You would've created a foul odor and a health hazard. And I might add that the foul odor might persist long after this deed. Put the sand from the harbor back on the beach, and what have you created? It's not a trick question.

From this perspective of a living harbor, would you now really be surprised that...

1. Hydrogen sulfide in beach-deposited dredge spoils, regardless of the amount or concentration, is toxic to humans, and may persist after it's deposited. And given the conditions of its formation, it's unlikely that it is alone.
2. Waste materials in one system are resources in another. They don't remain in the same state or condition when they're transported. Put dredged spoils from the harbor with their dilute toxins directly into the surf zone and you may be concentrating those toxins by up to several orders of magnitude, creating a dangerous exposure scenario. Dredged spoils evaluations and criteria were never modeled by the COE for surf zone disposal.
3. Several toxins are routinely found in Santa Cruz Harbor sediments, including Mercury, Arsenic, TBT, hydrocarbons, and pesticides. Guess what...they are all volatile from dredge spoils deposited directly on the beach. Any of these materials could be hazardous by themselves, but who knows what their combined effects might be, especially for children, people with already compromised health, and for those who must endure 24-7 exposure.
4. Analyze and debate the specific details as you wish, but it won't change the natural fact that dredged materials from Santa Cruz Harbor should not be deposited directly on the beach. The off-shore environment is infinitely more capable of efficiently processing these materials, then naturally re-depositing the cleaned sand back onto the beach.

Santa Cruz Harbor dredged materials were apparently disposed-of at the "off-shore" site "90% of the time" during the last dredge cycle—a significant improvement over prior performances. I understand the current proposal is to go back to beach disposal. To me this makes about as much sense as "humans evolving into apes." I understand that there apparently are some technical challenges facing the Harbor Board, but Public Health and Safety challenges cannot be considered as solutions.

I strongly recommend continued off-shore disposal of dredged materials from Santa Cruz Harbor!

Sincerely,
John Hansen
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Novato, CA 94949
415-382-0453
john@ergopathics.com

CCC Exhibit 7A
(page 6 of 6 pages)

October 26, 2006

To the California Coastal Commission,

I would like to offer some comments for your consideration regarding the Santa Cruz Harbor dredging disposal operations. I graduated with Honors in Environmental Studies from UC Santa Cruz. I wrote my Senior Thesis on Santa Cruz Harbor Dredging Operations for which I received the Dean's Undergraduate Award for the Division of Social Sciences. I am also a professional surfer and frequent visitor to the Harbor Beach Area. Some of these comments I have mentioned in prior correspondence but I would like to restate them here.

The California Coastal Commission needs to require the Santa Cruz Harbor to maintain offshore disposal of the dredge material. The last few years (prior to 2004) the Santa Cruz Harbor has predominately disposed of its dredge material offshore from the beach approximately 70 meters form the shoreline, which has been beneficial to mitigate the nuisance of the Hydrogen Sulfide gas (H2S), as well as supply sediments for an offshore sandbar. The dynamic action of waves breaking on this sandbar has dispersed the sediments in an even distribution toward the shore, providing beach nourishment and allowing the littoral drift of sand to continue its natural course along the coast. This offshore sandbar has also created a quality surfing wave, which has been a great bonus to the surfing community, and improved the recreational quality of Harbor Beach and Twin Lakes State Beach. Disposing of the dredge material through the offshore disposal pipe has, by almost all accounts, been the most ideal and effective solution to minimize adverse effects resulting from the Harbor's dredging activities.

However, during the last two years' dredging seasons (November 1, 2004 to May 1, 2006) the Santa Cruz Harbor has predominately discharged its dredge material directly onto the shore. Their justification for this action has been for "beach nourishment" purposes, but it has also caused another problem to become overwhelmingly apparent, the presence of Hydrogen Sulfide gas. The presence of this gas causes most people who come into contact with it to suffer eye irritation, feel light-headed, dizzy, or nauseous, even when subjected to it for only ten minutes or so, and it is strong enough to make me want to leave to go to another beach. I have personally felt these symptoms at least a half dozen times last year, and it is a disgrace to allow Santa Cruz Harbor to ruin the beach environment in this manner. In previous years, while dumping offshore and underwater, the Hydrogen Sulfide nuisance was mitigated. With the last couple years' onshore disposal actions, the offshore sandbar and surfing wave have disappeared and the rotten egg smell of the Hydrogen Sulfide has become so overwhelming that Harbor Beach is no longer a place of recreational value.

Beach replenishment is a reoccurring theme that the Harbor has attempted to use for justification of onshore disposal of dredge material, but this justification holds no merit for onshore disposal but instead actually helps support offshore disposal of dredge material. The onshore disposal creates an unnatural distribution of sediment while offshore disposal actually places the sediment back into the littoral coastal transport path from which it is obstructed by the west jetty. This removal of sediment from the littoral cell by the west jetty has built Seabright Beach while starving the downcoast beaches of Capitola of sand, but it can be reintroduced through offshore disposal. This would create a more natural distribution of sediment not only at Harbor Beach and Twin Lakes Beach,

Exhibit 7B
page 1 of 2

but for the downcoast beaches as well. The Harbor's interpretation of beach replenishment should not include huge mounds of sediment clumped onto the shoreline and flattened by tractors that permanently reside on the beach.

Harbor Beach has been designated a Recreational Use Beach, but this designation is unable to be fulfilled when a pipe stretches the length of the beach resting on the surface of the sand limiting access for children, the elderly, or disabled persons. The biggest problem with the onshore disposal is the presence of the nauseating Hydrogen Sulfide gas which is not only a State Regulated neurotoxin, but also removes any recreational value from this beach. The dredge disposal pipe should be buried under the sand along the east side of the small east jetty and stretch offshore underwater so as to allow access to the beach and realize its recreational value for everyone.

The Harbor should consider splitting the anchored offshore pipeline in a Y-formation and extend the outfall farther east of the current disposal location. This will allow the disposal location to be transferred from one outlet to the other when disposal depth becomes too shallow, along with moving the sediment mound farther east away from the Harbor Entrance, and maintaining the distance from shore. Nearshore, unanchored pipes will not realistically be able to accomplish sediment disposal goals in such a dynamic wave environment. I also wonder about other potentially toxic and carcinogenic compounds that are released into the air which we have yet to discover. The beach and harbor visitors, community, and local residents should not be test subjects for consistent exposure to harmful compounds.

Offshore disposal mitigates all problems that have arisen from the Harbor's desire to dredge onshore, from the Hydrogen Sulfide gas to the sediment distribution for beach replenishment. I know that the Monterey Bay Unified Air Pollution Control District, the Central Coast Regional Water Quality Control Board, and the Monterey Bay National Marine Sanctuary all want to maintain the Recreational Use Designation for Harbor Beach and could see this realized through requiring offshore disposal of dredge material. With all of the other compounding problems associated with onshore beach disposal, it seems that offshore disposal would be the most logical and ideal long-term solution for everyone involved. Keeping the dredge disposal pipe offshore at its current distance from shore (approx. 70 meters) is the condition that must be adopted.

I hope that the California Coastal Commission's Staff Report will recommend that the Santa Cruz Harbor be required to maintain offshore disposal of its dredge material.

Thank you for your time and consideration regarding this matter.

Sincerely,

Zachary Keenan

zacharykeenan@hotmail.com

Exhibit 7B
page 2 of 2

Brian Foss
Port Director
Santa Cruz Port District
135 Fifth Avenue
Santa Cruz, CA 95062

RE: Pipeline modification and the effects on the offshore dispersal of fine-grained sediment dredged from the inner Santa Cruz Harbor

DATE: August 14, 2006

Dear Mr. Foss,

In response to your request, Sea Engineering, Inc (SEI) has provided a professional opinion regarding the Port Districts proposal to modify the current placement of dredge outfall pipelines along the shoreline of Twin Lakes Beach for this season's dredging operations. Our opinion focuses on how the pipeline modifications may affect the offshore dispersal of fine-grained sediment dredged from the inner harbor and into the surf-zone at Twin Lakes Beach.

Please feel free to contact us if you have any questions or comments.

Sincerely,

Steve Watt
Marine Geologist
Sea Engineering, Inc.
Santa Cruz, CA 95060
(831) 421-0871

Pipeline modifications

Modifications to the current dredge pipeline configuration on Twin Lakes Beach are proposed by the Santa Cruz Port District. The harbor proposes three pipeline configurations spanning from the east harbor jetty to Schwan Lagoon. Each of the three configurations will have several different discharge points based on the flexibility and mobility of the pipelines (Figure 1). When extended into the ocean, the pipelines will not be anchored to the seafloor. The proposed pipeline configurations will provide the harbor with the flexibility to respond quickly to changing oceanographic conditions or other factors.

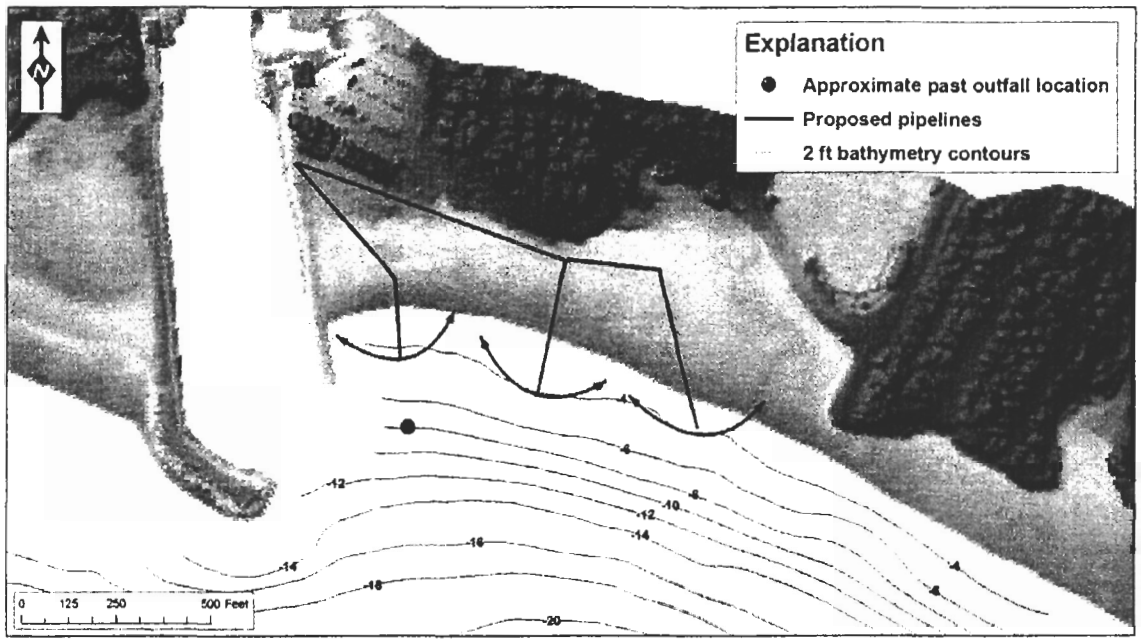

Figure 1. Illustration of the approximate locations for the proposed pipeline configuration.

Inner harbor fine-grained dredging

A series of inner Santa Cruz Harbor dredge monitoring programs spanning over the past five years concluded that no significant changes in sediment sample mean grain-size or silt and clay percentage occurred beyond the range of normal background conditions and that the Santa Cruz Bight is a high-energy coastline that does not support the deposition of silt and clay sized particles (Watt, 2003; SEI, 2005a; SEI 2005b). These conclusions were made when the pipeline outfall was anchored approximate 6 to 8 feet below MLLW.

It is our understanding that during fine-grained inner harbor dredging events, the proposed pipeline outfalls at any of the three locations described in Figure 1 will be extended (but not anchored) approximately 4 to 6 feet below Mean Lower Low Water (MLLW). This will place

CCC Exhibit 8
(page 1 of 3 pages)

the proposed outfalls in the surf-zone, an area where the most energy is available for the transport of sediments.

Professional Opinion

Assuming the outfall is submerged throughout the fine-grained dredging event, moving the pipeline outfall inshore from a depth of 6-8 ft MLLW to a depth of 4-6 feet MLLW further inside the surf-zone should increase the rate of dispersal of the dredged inner harbor sediment. High wave-energy has a greater potential to transport sediment in 4-6 feet MLLW than in 6-8 MLLW. Furthermore, the ability to easily and efficiently change the location of the dredge outfall pipe along the Twin Lakes nearshore provides the opportunity to manually disperse the material at different locations throughout the dredging event to further minimize the possibility for potential impacts on the Santa Cruz Bight shoreline. The proposed pipeline configuration may also minimize the transport of the sediments into the Santa Cruz Harbor mouth. Based on the conditions present, it is our professional opinion that moving the outfall pipe inshore to 4-6 feet MLLW and creating multiple discharge points will increase the rate of fine-grained sediment dispersal and decrease the possibility of any potential impacts which may occur due to inner Santa Cruz Harbor dredging. However, the high energy environment of the surf zone may pose structural issues to the pipeline which should be thoroughly investigated before proceeding with the proposed configuration.

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SANTA CRUZ PORT DISTRICT LONG-TERM DREDGING NEEDS
DRAFT SCOPE OF WORK

Pursuant to recommendations from the Monterey Bay National Marine Sanctuary (MBNMS) staff, the following outlines a scope of work to assess the environmental issues, studies, potential impacts, and potential alternatives related to the currently proposed and anticipated long-term dredging project needs for the Port District. The review will consider both inner harbor and harbor entrance dredging needs and will be based on review of existing data. The assessment will be reviewed with MBNMS and other regulatory agencies to further determine additional permitting requirements and environmental documents that may be required for NEPA clearance associated with these permits.

1. **Existing Permits.** Summarize existing permits regarding provisions for dredging and disposal.

2. **History of Port District Dredging and Disposal Operations**.
   - Describe historical volume and composition (grain size and any chemical constituents) of inner harbor and harbor entrance dredge materials.
   - Describe disposal areas and disposal methods and operations.
   - Summarize findings of the Demonstration Project.

3. **Existing Sedimentation.**
   - Summarize sediment sources to inner harbor.
   - Summarize existing inner harbor problems with description of volume and composition of inner harbor material proposed for disposal .

3. **Impacts of Existing Dredge Disposal.**
   - Impacts of disposal of fine-grain material on benthic and marine habitat.
   - Impacts of operations on special status species.
   - Air impacts.

4. **Alternatives.** Review alternatives to existing dredge disposal areas.
   - SF-14
   - Barging
   - Upland Disposal – Elkhorn Slough
   - Sediment Reduction / Control Efforts in Arana Gulch watershed
   - Harbor Breakwater Design
   - Beneficial Use Projects (skateboard park usage, slough restoration, etc)

5. **Future Estimated Dredging/Disposal Needs.**
   - Describe and characterize potential future dredging needs: volumes and composition by location.
   - Review potential permit amendments with agencies (COE, RWQCB, NBNMS).
   - Provide updated explanation of the pipe placement reconfiguration for the offshore disposal area, and revised chart illustrating that area.

Existing Studies

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