

Regional Board Analysis Of Enforcement Criteria Established section D.6 of Order No. 2006-0003-DWQ

The Cities assert that the Regional Board failed to consider the factors located in the Provision Section 6 of State Board Order No. 2006-0003-DWQ pertaining to Regional Board enforcement. The following is a factor by factor analysis keyed to the section and page number in the Regional Board's Staff Report that accompanied the ACL Complaint No. R9-2007-0099 issued on September 28, 2007.

6. *In any enforcement action, the State and/or Regional Water Boards will consider the appropriate factors under the duly adopted State Water Board Enforcement Policy. And, consistent with the Enforcement Policy, the State and/or Regional Water Boards must consider the Enrollee's efforts to contain, control, and mitigate SSOs when considering the California Water Code Section 13327 factors. In assessing these factors, the State and/or Regional Water Boards will also consider whether:*
- (i) *The Enrollee has complied with the requirements of this Order, including requirements for reporting and developing and implementing a SSMP;*

RB Analysis: This factor was addressed in the Regional Board's Staff Report under the Background and Allegations sections, and generally throughout the report. The Staff Report focused on the violation of the permit's Prohibition C.1.

The following is an Excerpt of Regional Board's Staff Report Section 2. Background, page 2.

The Dischargers are required to operate and maintain their sewage collection systems to prevent sanitary sewer overflows and spills in compliance with requirements of State Water Resources Control Board (SWRCB) Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

Prohibition C.1 of Order No. 2006-0003-DWQ states that the discharge of wastewater to waters of the United States is prohibited. The Buena Vista Lagoon is a water of the United States. Prohibition C.1 of Order No. 2006-0003-DWQ states that any SSO that results in a discharge of untreated or partially treated wastewater that creates a nuisance as defined in California Water Code Section 13050(m) is prohibited.

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(ii) *The Enrollee can identify the cause or likely cause of the discharge event;*

RB Analysis: The cause of the discharge is believed to be pipe failure as a result of external pipe corrosion.

The following is an Excerpt of Regional Board's Staff Report Section 4.1 Nature, Extent, & Gravity of the Sewage Discharge, page 4

The Dischargers hired Schiff Associates (a corrosion engineer) to assess the condition of the failed pipe. Schiff Associates, in a report dated April 17, 2007, responded that the likely cause of the pipe failure was external corrosion, caused by damage to a protective polyethylene encasement. The report concluded the initial damage to the encasement may have occurred during installation of the force sewer main. The report recommends additional testing of the pipe material, testing of the encasement material, and testing of other sections of the pipe for external corrosion. The testing recommended is an electromagnetic conductivity survey of the pipe to identify potential areas of corrosion. The report also recommends the pipe be evaluated for the feasibility of installing cathodic protection to protect against further corrosion.

(iii) *There were no feasible alternatives to the discharge, such as temporary storage or retention of untreated wastewater, reduction of inflow and infiltration, use of adequate backup equipment, collecting and hauling of untreated wastewater to a treatment facility, or an increase in the capacity of the system as necessary to contain the design storm event identified in the SSMP. It is inappropriate to consider the lack of feasible alternatives, if the Enrollee does not implement a periodic or continuing process to identify and correct problems.*

RB Analysis: The Dischargers were able to divert two million gallons of sewage to the City of Oceanside's system.

The following is an Excerpt of Regional Board's Staff Report Section 4.2.4 Response to Discharge, page 7

The Discharger's report dated April 23, 2007, states the discharge of untreated sewage from the 24-inch force sewer main into the Buena Vista Lagoon began sometime Friday, March 30, 2007, or Saturday, March 31, 2007. At approximately 7:00 PM on Sunday, April 1, 2007, a private citizen observed the discharge and reported it to police. Sometime after receiving a call from a private citizen about a sewage spill on April 1, 2007, the Dischargers diverted 2 million gallons of sewage to the City of Oceanside's sanitary sewer system for treatment, thereby reducing the potential volume of the untreated sewage being discharged into the Buena Vista Lagoon.

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- (iv) *The discharge was exceptional, unintentional, temporary, and caused by factors beyond the reasonable control of the Enrollee;*

RB Analysis: The Regional Board found no evidence that the discharge was intentional or occurred on a frequent basis, however the Regional Board did document the cessation of the spill. As discussed in the Staff Report cited below, Regional Board Staff dispute that the discharge was caused by factors beyond the reasonable control of the Dischargers.

The following is an Excerpt of Regional Board's Staff Report Section 4.2.2 Prevention of Discharge, page 6

The Dischargers failed to implement measures that could have prevented the discharge. This sewage spill occurred in the same area and from similar cause attributed to a 1.7 million gallon sewage spill, during January 2000, into Buena Vista Lagoon from a force main owned by the City of Oceanside. In May of 2000, the Regional Board assessed civil liability against the City of Oceanside in the amount of \$334,615. In 2000, the City of Oceanside's concluded that their spill resulted from a corroded ductile iron pipe force main. The force main was installed in 1980 under similar conditions and in the same general vicinity of the Discharger's failed force main pipeline. The City of Oceanside's corrosion engineer determined that the May 2000 spill was caused by exterior corrosion. Corroded portions of the City of Oceanside's pipeline were identified, repaired, and reported to the City as being in good condition. The City returned the pipeline back into service, during February 2000, only to have it fail again twelve days later, resulting in a discharge approximately 200,000 gallons of sewage into the Buena Vista Lagoon.

- (v) *The discharge could have been prevented by the exercise of reasonable control described in a certified SSMP for:*
- *Proper management, operation and maintenance;*
 - *Adequate treatment facilities, sanitary sewer system facilities, and/or components with an appropriate design capacity, to reasonably prevent SSOs (e.g., adequately enlarging treatment or collection facilities to accommodate growth, infiltration and inflow (I/I), etc.);*
 - *Preventive maintenance (including cleaning and fats, oils, and grease (FOG) control);*
 - *Installation of adequate backup equipment; and*
 - *Inflow and infiltration prevention and control to the extent practicable.*

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RB Analysis: This factor was addressed in several sections of the Regional Board's Staff Report stating that the Dischargers lacked flow monitoring devices to detect a spill, and that in their absence their visual observations were too infrequent to protect an extremely valuable water body.

The following is an Excerpt of Regional Board's Staff Report 4.2.1 Quantity of Sewage Discharge, page 5 & 6

The Dischargers could have implemented measures to reduce the amount of the discharge. The discharge was not discovered for almost 2 days because the Dischargers failed to have the capability to monitor the flow or pressure in the force sewer main. Capability to monitor the force main flow could have alerted the Dischargers of a reduction of flow through the sewage system. The Dischargers reported that the Buena Vista Pump Station is inspected daily.

The Dischargers also reported that when a call was received alerting them to a possible sewage spill, the spill was confirmed by a visual observation. While the better option would be for the Dischargers to install a redundant force main to be used for emergency situations, at the very least visual observations of the force main at various times of the day in the vicinity of the lagoon should be conducted to ensure that a sewage spill is not occurring.

The Dischargers reported that the Buena Vista Pump Station is inspected daily. However, it was a member of the public that initially called the City of Carlsbad Police Department to notify the City of the ongoing sewage discharge. The police then notified the City of Carlsbad on-duty person. The on-duty personnel notified City of Carlsbad Public Works personnel, who inspected the location and confirmed the spill. More reliable options exist to determine when a spill has occurred or is ongoing, such as alarms and monitoring devices that send an alarm when pressure drops, and/or installation of a redundant force main to be used for emergency situations. As this spill incident reveals, reliance on limited daily visual observation of the force main in the vicinity of the lagoon is not a sufficient tool that can be relied upon to ensure that a sewage spill is not occurring.

The following is an Excerpt of Regional Board's Staff Report Section 4.2.2 Prevention of Discharge, page 6 & 7

With knowledge of the condition of Oceanside's failed force main in 2000 and the extremely corrosive soil in the vicinity of their force main, the Dischargers failed to implement any additional measures to evaluate the condition of their force sewer main and identify potential problem areas. The Dischargers failed to conduct an internal survey or conduct other inspections of the force sewer main. Even though the Dischargers were fully aware of potential risks to the force

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sewer main, the Dischargers chose not to implement adequate preventative measures, such as, replacing or relining the pipe, installing a backup system, or at a minimum installing monitors and alarms that could have all reduced the volume of sewage discharge if not eliminate the discharge from occurring in March and April 2007.

The Dischargers recognized that the force sewer main needed improvement and/or replacement. As part of the City of Carlsbad's 2003 Sewer Master Plan, the City of Carlsbad included a project to install a parallel force main from the Buena Vista Pump Station to I-5 likely using a high-density polyethylene pipe that is not susceptible to corrosion, but the City of Carlsbad failed to construct the parallel force main before the discharge. As with Oceanside, the Dischargers have reported that the sections of pipeline on either side of the corroded area were in good condition. Yet the Dischargers have put the potentially corroded force sewer main back into service without upgrades or new lining.

(vi) *The sanitary sewer system design capacity is appropriate to reasonably prevent SSOs.*

RB Analysis: There is no evidence that the design capacity had any bearing on the cause or the magnitude of the sewage spill.

(vii) *The Enrollee took all reasonable steps to stop and mitigate the impact of the discharge as soon as possible.*

RB Analysis: This factor was addressed in several sections of the Regional Board's Staff Report. Although the Dischargers made reasonable efforts to respond to the spill, there were several errors that occurred that should be addressed by the Dischargers to ensure that they don't happen in the future.

The following is an Excerpt of Regional Board's Staff Report Section 4.1 Nature, Extent, & Gravity of the Sewage Discharge, page 4.

The Discharger's report dated April 23, 2007 states the discharge of untreated sewage from the 24-inch force sewer main into the Buena Vista Lagoon started sometime Friday March 30, 2007 or Saturday March 31, 2007. At approximately 7:00 PM on Sunday April 1, 2007, a private citizen observed the discharge and reported it to the police. The City of Carlsbad was notified and responded immediately to the report. By 8:00 PM, the City of Carlsbad confirmed the discharge (estimated at 1,000 to 2,000 gallons per minute). The Dischargers initially used a small backhoe in an attempt to excavate and repair the damaged force sewer main. Due to the location, depth, and lack of available force sewer main construction plans, the City of Carlsbad's initial efforts to repair the leak

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were inadequate. Because the City of Carlsbad could not locate the pipeline as built plans to ensure the exact location of the pipeline, the needed work to uncover and repair the pipeline was delayed.

By the next day, April 2, 2007, the Dischargers contracted with a private pipeline company that was qualified to repair the pipe. Repair of the pipe included constructing a sheet piling coffer dam, dewatering the area around the leak, cutting out the damaged section, and installing a repair coupling. All repair work was completed by 12:00 on April 3, 2007 and the force sewer main was returned to service.

The following is an Excerpt of Regional Board's Staff Report Section 4.2.4 Response to Discharge, page 8

The City of Carlsbad was notified by the Carlsbad Police Department and responded immediately to the report. By 8:00 PM, the City of Carlsbad confirmed the discharge (estimated rate of ranged from 1,000 to 2,000 gallons per minute). The City of Carlsbad initial response was to bring a small backhoe to the site in an attempt to excavate and repair the damaged force sewer main. This proved to be wholly inadequate, due to the location, depth, and lack of available force sewer main construction plans. Compounding the delay was the City of Carlsbad could not locate the appropriate plans to ensure the exact location of the pipeline. Consequently, this further delayed the need to uncover and repair the pipeline.

By the next day, April 2, 2007, the Dischargers contracted with a private pipeline company that was qualified to repair the pipe. Repair of the pipe included constructing a sheet piling coffer dam, dewatering the area around the leak, cutting out the damaged section, and installing a repair coupling. All repair work was completed by 12:00 on April 3, 2007 and the force sewer main was returned to service.

After the initial delays, the Dischargers implemented reasonable steps to terminate, evaluate, and cleanup the discharge. The Dischargers immediately monitored part of the lagoon for dissolved oxygen and bacteria to determine the extent of the sewage plume. The Dischargers also began aerating the lagoon to increase dissolved oxygen and protect aquatic life. From April 3 through April 10, over 40 million gallons of a mixture of lagoon water and sewage was pumped into the sanitary sewer system for treatment at the Encina Water Pollution Control Facility in Carlsbad. These cleanup efforts by the Dischargers expedited the cleanup of the Buena Vista Lagoon.