

San Diego
Regional Water Quality
Control Board



Executive Officer's
Report

June 13, 2007

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SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

EXECUTIVE OFFICER'S REPORT

June 13, 2007

PART A

SAN DIEGO REGION STAFF ACTIVITIES *(Staff Contact)*

1. County of San Diego DEH/LOP Coordination Meeting *(Jody Ebsen and John Odermatt)*

On May 18, 2007; the Regional Board staff (Jody Ebsen, John Odermatt, John Anderson, Kelly Dorsey and Bob Morris) attended a quarterly coordination meeting with the County of San Diego Department Environmental Health to coordinate regional implementation of regulatory oversight for leaking underground storage tank (LUST) cases and voluntary assistance program (VAP) cost recovery program. These quarterly meetings provide a regular forum for discussions with the County DEH/ Local Oversight Program (LOP) staff. The agenda for this meeting included: discussion of the status of the Regional Board Low Risk Guidance (1996), coordination with U.S. EPA Office of Underground Storage Tanks (via teleconference with Dr. Matthew Small), anticipated funding of San Diego County LOP contract with the State Water Board, and anticipated staff changes in the Regional Board UST Program. The meeting provides a regular forum for agency staff to coordinate on technical and policy issues related to local implementation environmental cleanup programs (e.g., for LUST cases and State Cleanup Program formerly SLIC cases) in San Diego County.

2. Storm Water Coordinating Meetings—May 2007 *(Michael McCann)*

In May 2007, the Regional Board participated in the following storm water coordinating meetings:

- Meeting with Orange County Vector Control District Staff--On May 4, Jeremy Haas met with the district staff to discuss their concerns and comments on the tentative MS4 permit.
- Aliso Creek Stormwater Permittee Meeting--On May 15, Jeremy Haas met with the seven MS4 permittees in the Aliso Creek watershed to discuss urban runoff issues, including the Tentative MS4 Permit for Orange County.
- San Diego County MS4 Copermittees Meeting—On May 17, Ben Neill and Christina Arias participated in the monthly copermittees meeting.

- Orange County Stormwater Meeting--On May 22, Mariah Mills and Jeremy Haas met with the County of Orange permitting staff to discuss a number of projects.
- Riverside County MS4 Stormwater Meeting--On May 24, Brandi Outwin participated in the monthly permittee meeting.

3. Strategic Plan Regional Outreach Session—May 9, 2007 (*Michael McCann*)
(Attachment A-3)

The success of the outreach session hosted by the San Diego Regional Board on May 9, 2007 can be attributed to the 71 energetic stakeholders that participated. In recognition of those who attended, attached is the list of the 71 participants.

PART B **SIGNIFICANT REGIONAL WATER QUALITY ISSUES**

1. Clean Water Act Section 401 Water Quality Certification Actions Taken in May 2007 (*Chiara Clemente*) (Attachment B-1)

Section 401 of the Clean Water Act requires that any person applying for a federal permit which may result in a discharge of pollutants into Waters of the United States must obtain a water quality certification that that specific activity complies with all applicable state water quality standards, limitations, requirements, and restrictions. The most common federal permit that requires a 401 Certification is a CWA Section 404 permit, issued by the Army Corps of Engineers, for the placing of fill (sediment, rip rap, concrete, pipes, etc.) in Waters of the U.S. (i.e. Ocean, bays, lagoons, rivers and streams).

Upon receipt of a complete 401 certification application, the Regional Board may either certify the project or deny certification, with or without prejudice. In cases where there are impacts to Waters of the U.S., the Regional Board may issue a conditional certification. The certification can be either in the form of a conditional certification document approved by the Regional Board Executive Office, or Waste Discharge Requirements (WDRs), adopted by the Regional Board. And, in the case where a federal permit is not required because impacts have been determined to be only to Waters of the State, the Regional Board may adopt WDRs. Table B-2 (attached) contains a list of actions taken during the month of May. Public notification of pending 401 Water Quality Certification applications can be found on our web site at:

<http://www.waterboards.ca.gov/sandiego/programs/401cert.html>.

2. Significant Enforcement Actions for May 2007 (*Mark Alpert*) (Attachment B-2)

The following is a summary of all enforcement actions during the month of May 2007. During this period the Regional Board initiated 14 enforcement actions (6 Staff Enforcement Letters, 1 Notice of Violation, 2 Investigative Orders, 4 Cleanup and Abatement Orders, and 1 Administrative Civil Liability Order).

A detailed listing of the most significant enforcement actions undertaken by the Regional Board during the period is attached. Information on sewage spills is provided in a separate discussion topic entitled "Sewage Spills").

AGENCY/ FACILITY NAME	CITY	PROGRAM ¹	ACTION DATE
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Staff Enforcement Letter			
Pauma Valley Community Services District, Treatment Plant	Pauma Valley	Non15	5/1/2007
City of Oceanside, Water Utilities Ocean Outfall	Oceanside	NPDES	5/1/2007
South Orange County Waste Water Authority, Oso Creek Water Reclamation Plant	Mission Viejo	Non15	5/21/2007
City of San Clemente, Water Reclamation Plant	San Clemente	Non15	5/23/2007
San Juan Capistrano, Reverse Osmosis Water Treatment Plant	San Juan Capistrano	NPDES	5/24/2007
South Orange County Waste Water Authority, Los Alisos Water Reclamation Plant	Irvine	NPDES	5/24/2007

Investigative Orders (13267 letters)			
Fallbrook Public Utilities District, Land Outfall	Fallbrook	NON15	5/3/2007
City of San Marcos, Bradley Park Landfill	San Marcos	401 Cert	5/14/2007
Rancho CA Water District, Sewage Collection System	Temecula	SSO	5/14/2007

Cleanup and Abatement Orders			
United States Marine Corp, Las Pulgas Landfill	Camp Pendleton	LNDISP	5/9/2007
Gunnings et al, Seawall construction and rip-rap removal project	Coronado	CER	5/10/2007

AGENCY/ FACILITY NAME	CITY	PROGRAM ¹	ACTION DATE
Dickerson, et al, Seawall construction and rip- rap removal project	Coronado	CER	5/10/2007
Lennar Homes, Spencer's Crossing	Temecula	CER	5/11/2007

Administrative Civil Liability Orders			
South Orange County Water Authority, San Juan Creek Ocean Outfall	San Juan Capistrano	NPDES	5/9/2007

Program Acronyms¹

CER	Water Act Section 401 Certification
CONSTW	Construction Storm Water
DoD	Department of Defense
INDSTW	Industrial Storm Water
LNDISP	Land Disposal
MNSTW	Municipal Storm Water
NPDES	National Discharge Elimination System
WDR	Waste Discharge Requirements
SSO	Sanitary Sewer Overflow
SLIC	Spills, Leaks, Investigations, and Cleanup
TANKS	Underground Storage Tank

3. Foothill South SR-241 Toll Road Extension, Orange County (*Jeremy Haas*)

The Regional Board has previously requested periodic updates on the proposed project to construct a southerly extension of State Route 241, which is a toll road also known as the Foothill Transportation Corridor, located in Orange County. The southerly toll road extension is also referred to as the South Orange County Transportation Infrastructure Improvement Project (SOCTIIP) and as the Foothill Transportation Corridor-South (FTC-South). The Foothill/Eastern Transportation Corridor Agency (TCA), a Joint Powers Authority, is the project sponsor. The planned toll road extension is approximately 16 miles long plus approximately 0.8 miles of improvements on Interstate 5. The proposed roadway includes four general-purpose travel lanes, two in each direction, for the entire length of the corridor. Two additional lanes could be added in the future if traffic conditions warrant. The planned alignment would connect Interstate 5 at San Onofre State Beach with the existing portion of SR-241 at Oso Parkway in the Coto de Caza area of Orange County. An aerial map of the alignment is available on the TCA web page at: <http://www.tcagencies.com/>.

The TCA approved an Environmental Impact Report (EIR) for the proposed project and the proposed alignment alternative on February 23, 2006. In March 2006 the State Attorney General, the State Native American Heritage Commission, and a group of environmental organizations filed separate lawsuits in San Diego Superior Court challenging the approval of the EIR. A federal Environmental Impact Statement is still in development.

The TCA has applied to the Regional Board for a section 401 water quality certification for discharges of fill to federal waters and requested waste discharge requirements for discharges of fill to non-federal waters of the State associated with the project. The Regional Board's Northern Watershed Unit requested additional technical information following two site inspections in September and October 2006. A supplemental information package was submitted to the Regional Board in May 2007. The information provided, however, did not contain all the information previously requested and did not clearly demonstrate that the proposed project would meet water quality standards. Specifically, concerns regarding the storm water runoff management plan and proposed habitat mitigation plan have not been adequately addressed. As a result, the application was denied without prejudice, which provides TCA an opportunity to address outstanding concerns.

The Northern Watershed Unit plans to meet with TCA and its water quality consultants in June 2007. Following submittal and review of another package of information, the Regional Board may be asked to consider a combined Order for 401 Certification and waste discharge requirements.

Additional information about the proposed project can be found in the September 13, 2006 Executive Officer's Report, which can be accessed on the Regional Board's web site at:

http://www.waterboards.ca.gov/sandiego/eo_report/eoreport.html

4. Otay Water District Recycled Water Project (*Melissa Valdovinos*)

Otay Water District entered into an agreement with the City of San Diego in 2003 to purchase up to 6.0 million gallons per day (MGD) of recycled water from the City of San Diego South Bay Water Reclamation Plant (SBWRP) located in the Tijuana River Valley. With the proper infrastructure and permitting now in place, Otay Water District is prepared to launch the largest recycled water network in San Diego County.

Otay Water District is a publicly-owned water and sewer service agency serving approximately 186,000 customers within a 125.5 square mile area that covers several communities in the southern and eastern areas of San Diego County. The demand for recycled water in the Otay Water District service area far exceeds the capacity of its Ralph W. Chapman Water Reclamation Facility (RWCWRF), and therefore, supplies of recycled water have been supplemented with potable water. In order to service this demand for recycled water without

supplementing with potable water, Otay Water District entered into the agreement with the City of San Diego in 2003 and put in place the needed infrastructure, including a six-mile long, 30-inch diameter recycled water transmission main, a pump station capable of delivering 16 MGD, and a 12 million gallon recycled water reservoir. On May 9, 2007, the Regional Board adopted Order No. R9-2007-0038, which establishes requirements for the production, distribution, and use of up to 10.3 MGD of blended recycled water from the RWCWRF and SBWRP.

Planning for this \$43 million project, which has been named the Supply Link Project, is a multi-agency effort that began in the mid-1990s with the goal of increasing recycled water use in south San Diego County. With the combined recycled water from the SBWRP and the 1.3 MGD existing supply from the RWCWRF, Otay Water District expects it will meet 20 percent of its total water demand with recycled water.

On June 1, 2007, Otay Water District held a ceremony to inaugurate the new Supply Link Project. Several local elected officials and water agency representatives spoke at the ceremony, commending Otay Water District's vision and efforts on this project.

5. City of Coronado Transbay Sanitary Sewer Force Main Project Completed (Melissa Valdovinos)

The City of Coronado completed its transbay sewer main replacement project on April 23, 2007. Sewage from Coronado, including Naval Air Station North Island, flows by gravity and pumping to the Transbay Pump Station at the Coronado Ferry Landing. The Transbay Pump Station then transfers the sewage through a force main under San Diego Bay to the City of San Diego's sewage collection system for treatment at the City of San Diego Point Loma Wastewater Treatment Plant.

Prior to April 23, 2007, the force main conveying sewage was a 24-inch diameter ductile iron pipe that was installed in the early 1970s. A recent sonar evaluation of this force main revealed that the 24-inch pipe was only providing the capacity of a 19-inch diameter pipe. This line was the only exit route for sewage from Coronado and due to its age and compromised capacity, the City of Coronado considered the installation of a reliable replacement sewer line a top priority.

Construction to install the new 23-inch diameter, 3,200-foot long high density polyethylene pipe began in January 2007. The abandoned line will be maintained as a back-up sewer line for potential emergency needs.

6. Steelhead Trout Recovery Efforts in the San Diego Region (Bruce Posthumus) (Attachment B-6)

Steelhead trout (*Oncorhynchus mykiss irideus*) are rainbow trout that are anadromous, i.e., they hatch in streams, migrate to the ocean, and return to streams to spawn. Steelhead occurred naturally in coastal-draining stream

systems throughout California, including the San Diego region, and south to northern Baja California. Southern steelhead, which occur from roughly Monterey County south, are classified as a "species of special concern" by the California Department of Fish and Game. Southern California steelhead, which occur from roughly Santa Barbara County south, are considered to be an "evolutionary significant unit" and a "distinct population segment." The population and distribution of Southern California steelhead have declined dramatically. Southern California steelhead are listed as "endangered" under the federal Endangered Species Act.

Since their life cycle involves and depends on conditions in headwaters, streams, estuaries, and the ocean, steelhead serve as indicators of the health of their native watersheds and waters. Various factors have contributed to the decline of steelhead in southern California and continue to prevent their recovery, including:

- Artificial barriers that prevent fish from moving upstream to spawn (e.g., dams and drop structures);
- Changes in stream flow regimes (e.g., from surface water diversions and groundwater extraction);
- Other modifications to stream systems and riparian corridors (e.g., stream channelization and changes to stream / riparian habitats);
- Loss of and changes to estuaries;
- Invasive non-native species; and
- Water quality degradation.

In the San Diego region, segments of streams in the watersheds of San Juan Creek (including Trabuco Creek) and San Mateo Creek have been designated as critical habitat for southern California steelhead. In the past few months, steelhead have been observed in San Juan Creek and the San Luis Rey River.

Several ongoing southern California steelhead recovery efforts are located in or include the San Diego region.

- The state Coastal Conservancy has provided funding to Trout Unlimited for assessment, planning, and invasive species management as part of an effort to restore steelhead and other native fish to the watersheds of San Mateo Creek and San Onofre Creek.
- Trout Unlimited and the California Department of Fish and Game are preparing a "Steelhead Recovery Watershed Management Plan" for San Juan and Trabuco Creeks.
- The state Wildlife Conservation Board has provided funding to Trout Unlimited for design and construction of a fishway (also known as a fish ladder) to enable steelhead to move upstream past an artificial barrier in Trabuco Creek where the creek flows under Interstate 5.
- The National Marine Fisheries Service (NMFS) is preparing a "Recovery Plan" for southern California steelhead. NMFS has held a series of public workshops to gather information in support of such a plan, including

workshops held in Carlsbad on April 12 & 13 and June 1, 2007. At least one more meeting in the San Diego area is planned.

Mariah Mills and Bruce Posthumus have participated in various steelhead recovery meetings on behalf of the SDRWQCB.

Attachment B-6 lists websites that provide additional information about steelhead and steelhead recovery efforts in the San Diego region.

7. Meeting of the WateReuse Association, San Diego Chapter (*Robert Morris*)

On May 16th, Bob Morris from the Northern Core Regulatory Unit participated in a panel discussion at the San Diego Chapter meeting of the WateReuse Association. The Association is a national organization whose objective is to promote reclamation, recycling, reuse, and desalination throughout the United States. The members of the San Diego Chapter include water agencies and municipalities, corporations, consulting firms, and recycled water users.

Mr. Morris briefed the group on the recent State Board strategic planning process, noting that water recycling was considered one of the Board's priority programs and that support of water recycling efforts was one of the key strategies in its current strategic plan. Consistent with that strategy, Mr. Morris noted that the State Water Board recently conducted a scoping workshop to identify water recycling issues that could be addressed in the development of statewide water recycling policy. Also discussed was the status of Regional Board update of its general waiver of waste requirements and the potential relevance to water recycling resulting from the implementation of total maximum daily loads.

Following the presentations by Mr. Morris and the other panelists, there was a general discussion in response to questions from the Chapter members regarding specific recycled water requirements and procedures. This provided the State and County Health Departments as well as the Regional Board with an opportunity to better understand the concerns of the regulated community and to clarify any misunderstandings with the prescribed requirements.

The Regional Board Core Regulatory Units will continue to attend future meetings of the local chapters of the WateReuse Association to facilitate discussion with their members.

8. MCRD/NTC Landfill: Closure Plan (*Beatrice Griffey and John Odermatt*)

The Marine Corps Recruiting Depot (MCRD) Landfill (a.k.a. Naval Training Center or "NTC" Landfill) encompassing approximately 32 acres, is located northwest and west of the San Diego International Airport. The U.S. Marine Corps used the facility as a refuse disposal area for 21 years (between 1950 and 1971). During 2001, the ownership of 52 acres in the vicinity of and including the landfill was transferred from the U.S. Navy to the San Diego Unified Port District

(Port District). In August 2002, the San Diego County Regional Airport Authority (Airport Authority) assumed responsibility of the landfill under a 66-year lease with the Port District. On November 12, 2003, the Regional Board adopted Addendum No. 4 to Order 97-11 identifying the Airport Authority as being the Discharger responsible for compliance with post-closure monitoring and maintenance at the MCRD/NTC Landfill.

On March 6, 2007, the Airport Authority provided the Regional Board with a closure plan for MCRD/NTC Landfill. The closure plan presents two objectives:

- to remove buried wastes so as to allow the future development of the area to support airport operations, and
- satisfy clean closure requirements outlined in applicable sections of the California Code of Regulations [Title 27, §21091(f)], if possible.

The Airport Authority anticipates that additional airport facilities will be constructed at the site, including: an airport apron, airport terminal buildings, a roadway, and a parking lot. To achieve project objectives, the Airport Authority proposes the excavation and disposal of up to 145,000 cubic yards (cy) (4 million ft³) of buried waste, and backfill and compaction of the excavation to provide a suitable building surface. Further, the Airport Authority estimates that the project to implement the closure plan will last approximately 7 months (December 2007 through July 2008), and cost approximately 65 million dollars.

On May 16, 2007, the Regional Board Land Discharge Unit staff attended a meeting with the Regional Airport Authority, the City of San Diego Solid Waste Local Enforcement Agency (or LEA), and the San Diego Air Pollution Control District (APCD) to discuss the closure plan. The regulatory agencies agreed to provide the Airport Authority with written comments on the proposed closure plan to ensure project objectives are achieved, to the extent practicable, and that activities are conducted in accordance with current applicable environmental requirements.

9. Proposed Gregory Canyon Landfill (Carol Tamaki and John Odermatt)

This item is provided to update the Regional Board on recent events relating to the proposed Gregory Canyon Landfill.

CEQA Process and Status of Revised EIR

The County of San Diego Department of Environmental Health (DEH) Solid Waste Local Enforcement Agency (LEA) has completed the Revised Final Environmental Impact Report (RFEIR) for the Gregory Canyon Landfill Project (Log No. ER 98-02-025). On April 30, 2007 the County of San Diego Department of Environmental Health (DEH) provided the Regional Board with a copy of the Final Revised Partial Environmental Impact Report (RPEIR) for the Gregory Canyon Landfill. The RPEIR and the notice of completion (NOC) are posted on

the San Diego County Web Page at <http://www.co.san-diego.ca.us/deh/chd/gchome.html> for public review. The Regional Board has not received notification that the RPEIR has been certified by the lead agency (County of San Diego). The certification of the RPEIR was also covered in recently published stories in the San Diego Union-Tribune (at <http://www.signonsandiego.com/news/northcounty/20070602-9999-1mi2greg.html>) and North County Times (at http://www.nctimes.com/articles/2007/06/02/news/inland/23_32_506_1_07.txt).

Public Participation Requirements in CCR Title 27

The Regional Board staff has not yet identified the specific procedures the Board should follow to provide a fair opportunity for all parties, and interested persons, to fully participate in the Board's proceedings. This topic will be further discussed with the Board's legal counsel in the future. Title 27, California Code of Regulations, section 21730 requires that the Regional Board provide at least 45-days public notice before any Regional Board meeting to consider adoption of tentative waste discharge requirements for any Municipal Solid Waste (Class III) Landfill. In addition, the Regional Board is required to make copies of the agenda package (including the tentative Order) available to the public not less than 30-days before any meeting at which the Regional Board members would consider this issue.

Scheduling an Agenda Item for consideration by the Regional Board

The Regional Board cannot take an action adopting waste discharge requirements for the proposed Gregory Canyon Landfill until the CEQA process is completed and the EIR is properly certified by the lead agency. In June 2006, the Regional Board Executive Officer informed the Regional Board that he preferred not to schedule a public hearing on the proposed Gregory Canyon Landfill project until after the County of San Diego completes its CEQA process.

In the interim, the Regional Board staff continues to move forward with the development of a tentative Order and supporting technical information for a future agenda item regarding the proposed project. However, in view of the remaining uncertainties as to when a certified EIR will be available, the Regional Board staff cannot be certain when the future agenda item will be scheduled.

The Regional Board continues to maintain a web site and an email list (currently 146 subscribers on our State Board LYRIS list) to keep the public informed about developments regarding the proposed Gregory Canyon Landfill project. The web page is available at http://www.waterboards.ca.gov/sandiego/units/ldu/Canyon%20Project/gregory_canyon_landfill.html.

10. Proposed Campo Landfill (*Beatrice Griffey and John Odermatt*) (*Attachment B-10*)

The Campo Indian Reservation is located in southeastern San Diego County, approximately 65 miles east of San Diego, between the communities of Boulevard to the east, and Campo and Cameron Corners to the west. At a public meeting held October 12, 1989, the Campo Band of Kumeyaay Indians (Campo Band) announced their intention to construct and operate a Class III solid waste landfill, recycling, and composting facility on their reservation. Following the direction received from a previous Regional Board (1990), the Regional Board staff has chosen not to review the environmental documents prepared for the proposed project. Additional rationale for this course of action includes the following:

- The proposed project is located within a federal reservation (Campo Indian Reservation) and therefore is under the jurisdiction of the federal government and a sovereign Native American tribal government. As such, the Regional Board does not have direct jurisdictional authority over the proposed project.
- On December 10, 1992, the State Water Resources Control Board (SWRCB) entered into a cooperative agreement with the Campo Environmental Protection Agency (Campo EPA) providing that the SWRCB receive cost recovery for providing staff technical review and written comments on project related documents. One example of that work is provided as attachment B-10 to this item. To the knowledge of Regional Board staff, the SWRCB is meeting their cooperative agreement obligations.
- Regional Board staff review and comments of the project related documents would duplicate the efforts by the State Water Board, and this is viewed as an inefficient use of the very limited staff resources available to the Regional Board.

Recently, a representative (Ms. Donna Tisdale) of the non-profit group Backcountry Against Dumps requested in writing that the Regional Board Executive Officer direct staff to review the draft supplemental environmental impact study (draft EIS) that is expected to be released in July. On May 21, 2007, the Regional Board Executive Officer responded via email to Ms. Tisdale's request informing her that the Regional Board does not have the authority to oversee the project and suggested that she contact the U.S. Environmental Protection Agency (EPA) regarding her concerns. Additional information on the proposed project is also available in past Executive Officer's Reports dated March 12, 2003 and November 12, 2003 available on the San Diego Regional Board Website at http://www.waterboards.ca.gov/sandiego/eo_report/eoreport.html.

PART C
STATEWIDE ISSUES OF IMPORTANCE TO THE SAN DIEGO REGION

1. Areas of Special Biological Significance - Natural Water Quality Committee
(Bruce Posthumus)

Areas of Special Biological Significance (ASBS) are ocean areas designated by the SWRCB as "requiring protection of species or biological communities to the extent that alteration of natural water quality is undesirable." Thirty four ASBS have been designated statewide; three of these are located entirely within the San Diego region; a fourth is located partly in the San Diego region and partly in the Santa Ana region.

The SWRCB Ocean Plan prohibits waste discharges to ASBS. However, exceptions to Ocean Plan requirements can be granted by the SWRCB with the concurrence of the U.S. Environmental Protection Agency. In November 2002, the University of California, San Diego Scripps Institution of Oceanography (UCSD/SIO) requested an exception from the Ocean Plan prohibition of waste discharges to ASBS. In July 2004, the SWRCB granted UCSD/SIO such an exception (Resolution No. 2004-0052) for across-the-beach discharges of waste seawater from aquaria and research laboratories, seawater filter backwash, and storm water and other urban runoff to the San Diego Marine Life Refuge ASBS. The exception was granted subject to a number of conditions which the SWRCB directed the SDRWQCB to establish in waste discharge requirements (WDR) for UCSD/SIO. Those conditions were included in the WDR for UCSD/SIO (Order No. R9-2005-0008) that the SDRWQCB adopted in February 2005.

One condition of the Ocean Plan exception and WDR for UCSD/SIO is that "natural water quality conditions in the receiving water, seaward of the surf zone, must not be altered as a result of the discharge." The Ocean Plan exception and WDR for UCSD/SIO assign the task of defining "natural water quality" to an advisory committee created by the SWRCB and composed of SWRCB and SDRWQCB staff, a representative from UCSD/SIO, and two scientists selected by the SDRWQCB from academic organizations other than UCSD/SIO. At a minimum, the committee is supposed to meet annually to review monitoring data and to advise the SDRWQCB whether natural water quality is being altered in the ASBS as a result of the UCSD/SIO discharges. The committee has met seven times; first in October 2005; most recently in March and May, 2007. The SWRCB has contracted with the Southern California Coastal Water Research Project (SCCWRP) to support the committee.

The committee, referred to as the ASBS Natural Water Quality Committee, has agreed that its efforts should focus on the following questions:

- 1) Are permit limits being met?
- 2) Are water quality objectives being met?
- 3) What are the impacts to marine species and communities?
- 4) What would ambient marine water quality be like without waste discharges?

5) How does effluent impact ambient marine water quality?

The committee has also agreed that its work should provide guidance for assessing natural coastal ocean water quality and impacts to water quality and marine life in any ASBS.

The committee has received reports on other ASBS-related activities throughout the state, including the San Diego-La Jolla Ecological Reserve ASBS, which is located immediately adjacent to the San Diego Marine Life Refuge ASBS. The committee has also received reports on the results of monitoring related to the San Diego Marine Life Refuge ASBS and is considering what other monitoring may be needed to answer the questions identified above. The committee has not yet made a determination of whether natural water quality is being altered in the ASBS as a result of the UCSD/SIO discharges. The next scheduled meetings of the committee are in July and September.

Bruce Posthumus has represented the SDRWQCB on the committee since the retirement of Pete Michael at the end of 2006.

Information about ASBS, the Ocean Plan exception and WDR for UCSD/SIO, and the committee is available at <http://www.waterboards.ca.gov/plnspols/asbs.html>.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

**SIGNIFICANT NPDES
PERMITS, WDRs, AND
REGIONAL BOARD
ACTIONS**

JUNE 13, 2007

APPENDED TO EXECUTIVE OFFICER REPORT

SIGNIFICANT NPDES PERMITS, WDRS, AND RB ACTIONS

DATE OF REPORT June 13, 2007	NAME OF PERMIT/WDR/RB ACTION	Action Type	Initial Document Application Complete	Dish./RWQ Limits and Monitoring Plan Known	Draft Complete	Public Rev. & Comment	BOARD HEARING & ADOPTION	Consent Item	COMMENTS	Staff
AUGUST 8, 2007 RB MEETING San Diego Regional Board Office										
	ORANGE COUNTY MUNICIPAL STORMWATER PERMIT	Adoption: NPDES Permit Reissuance	100%	100%	100%	50%	August 8, 2007	No	NPDES WORKPLAN FY 2006-07	Smith
	HUBBS RESEARCH AGUA HEDIONDA LAGOON SAN DIEGO COUNTY	NPDES Permit Reissuance	100%	100%	100%	0%	August 8, 2007	No	NPDES WORKPLAN FY 2006-07	Becker
	DAKOTA RANCH DEVELOPMENT CO. 401 W.Q. CERTIFICATION SAN DIEGO COUNTY	Hearing: Admin. Civil liability	100%	NA	100%	0%	August 8, 2007	No	ACL COMPLAINT \$140,500	Melbourn
	SAN DIEGO COUNTY WATER AUTHORITY SAN VICENTE PIPELINE PROJECT	Hearing: Mandatory Minimum Penalty	NA	100%	100%	0%	August 8, 2007	No	Mandatory Minimum Penalty \$120,000	Stewart
	TERRA VAC REMEDIATION DEWATERING PROJECT AT 2945 PACIFIC HWY SAN DIEGO	Hearing: Mandatory Minimum Penalty	NA	100%	100%	0%	August 8, 2007	No	Mandatory Minimum Penalty \$27,000	Alpert
	FRANK J. KONYN DAIRY SAN PASQUAL VALLEY SAN DIEGO COUNTY	NPDES Permit Reissuance	100%	100%	100%	0%	August 8, 2007	Yes	NPDES Workplan FY 2005-06	Valdovinos
	T.D. DAIRY (VAN TOL DAIRY) RAMONA SAN DIEGO COUNTY	NPDES Permit Reissuance	100%	100%	100%	0%	August 8, 2007	Yes	NPDES Workplan FY 2005-06	Valdovinos
SEPTEMBER 12, 2007 RB MEETING San Diego Regional Board Office										
	UPDATE OF POLICY ON WAIVERS OF WASTE DISCHARGE REQUIREMENTS	Hearing: Basin Plan	NA	NA	30%	0%	September 12, 2007	No		Chlu
	REGIONWIDE BACTERIA TOTAL MAXIMUM DAILY LOAD	TMDL Adoption	NA	NA	100%	80%	September 12, 2007	No	TMDL Workplan FY 2005-06	Arias
NOVEMBER 14, 2007 RB MEETING San Diego Regional Board Office										
	CONTINENTAL MARITIME OF SAN DIEGO SHIPYARD SAN DIEGO BAY	NPDES Permit Reissuance	0%	100%	0%		November 14, 2007	No	NPDES Workplan 2007-08	Kelley
	BAE SYSTEMS SAN DIEGO SHIP REPAIR SHIPYARD SAN DIEGO BAY	NPDES Permit Reissuance	0%	100%	0%		November 14, 2007	No	NPDES Workplan 2007-08	Kelley
	OCEAN DISCHARGER RECEIVING WATER MONITORING PROGRAM UPDATES	NPDES Permits Revisions	NA	50%	0%	0%	November 14, 2007	No		Kelley
	S & S FARMS LIVESTOCK RAISING FACILITY RAMONA SAN DIEGO COUNTY	NPDES Permit Reissuance	0%	90%	0%	0%	November 14, 2007	No	NPDES Workplan 2007-08	Kelley

SIGNIFICANT NPDES PERMITS, WDRS, AND RB ACTIONS

DATE OF REPORT																					
June 13, 2007																					
NAME OF PERMIT/WDR/RB ACTION	Action Type	Initial Document Application Complete	Dish./RWQ Limits and Monitoring Plan Known	Draft Complete	Public Rev. & Comment	BOARD HEARING & ADOPTION	Consent Item	COMMENTS	Staff												
FEBRUARY 13, 2008 RB MEETING San Diego Regional Board Office																					
NAASCO/GENERAL DYNAMICS CORP. SHIPYARD SAN DIEGO BAY	NPDES Permit Reissuance	0%	100%	0%	0%	February 13, 2008	No	NPDES Workplan 2007-08	Kelley												
US NAVY NAVAL BASE PT. LOMA SAN DIEGO BAY	NPDES Permit Reissuance	0%	100%	0%	0%	February 13, 2008	No	NPDES Workplan 2007-08	Kelley												
US NAVY NAVAL BASE SAN DIEGO SAN DIEGO BAY	NPDES Permit Reissuance	0%	100%	0%	0%	February 13, 2008	No	NPDES Workplan 2007-08	Kelley												
PENDING / UNSCHEDULED ACTIONS																					
PROPOSED GREGORY CANYON LANDFILL NORTH SAN DIEGO COUNTY	Hearing: New WDRs	100%	85%	85%	0%		No		Tamaki												

STRATEGIC PLAN OUTREACH PARTICIPANTS – MAY 9, 2007

Rick	Alexander	Sweetwater Authority
Teresa	Acerro	
Vaikko	Allen	CONTECH Storm Water Solutions
Robyn	Badger	SD Zoo
Mike	Beanan	South Laguna Civic Assoc.
Darren	Belton	U.S. Navy
Debbie	Biggs	Encina Wastewater Authority
Kevin	Carr	Sea World
Charles	Cheng	SDRWQCB
Rob	Chichester	U.S. Navy
Bob	Collins	
ArleneDea	Deeley	City of San Diego Water
Joseph	DeStefano II	County of San Diego
John	Flores	La Jolla Band of Indians
Rorie	Gabat	U.S. Navy
Marco	Gonzalez	Coast Law Group
Brian	Gordon	U.S. Navy
Willie	Graters	Industrial Environmental Assoc.
Michael	Hazzard	Trout Unlimited
Ruth	Heifetz	UCSD School of Medicine
Jess	Hernandez	City of San Diego
Shelby	Hull	CONTECH Storm Water Solutions
Megan	Johnson	SCWRP
Jayne	Joy	Eastern Mun. WD
Jeremy	Jungreis	USMC
Ed	Kimura	Sierra Club San Diego Chapter
Con	Kontaxis	Caltrans
Greg	Krzym	USBTZ
Mo	Lahsaie	City of Oceanside
Eric	Larson	San Diego County Farm Bureau
Luis	Ledesma	USMC
Barry	Lindgren	San Elijo Lagoon Conservancy
Dan	Lizzul	USMC
John	Lorman	Procopio, Cory, Hargreaves & Savitch
Vicki	Long	EMA/Resource Conservation District
Karen	McClune	Hubbs Sea World Research
Ben	McCue	Wildcoast
Leo	Miras	Environmental Health Coalition
Andre	Monette	Best Best & Krieger
Don	Moore	Lennar Communities
Eileen	Maher	Port of SD
Diane	Nygaard	Preserve Calavera
Richard	Opper	Opper & Varco
Jeffery	Parek	San Diego Water Dept.
Helen	Perry	City of Santee
Jennifer	Pettis	NOAA Fisheries
Joe	Purohit	
John	Quenzer	D-Max/City of National City

Debby
Bruce
Wayne
Catherine
Toby
Dick
Tracy
Andy
Core
Brian
Barry
Gabriel
John
George
Pei-Fen
Pat
Lovanka
Jon
Bob
Elaine
Lisa
Chris
Joe

Reece
Reznik
Rod
Rom
Roy
Runge
Sahagun
Schucteer
Shaffer
Shin
Snyder
Solmer
Stump
Sutherland
Tamashino
Tennant
Todt
Van Rhyn
Wheeler
Wkey
Zawashi
Zirkle
Zucker

PDC
SD Coastkeeper
Foley & Lardner
City of San Diego
SDCWA
SCWD
USMC
Zoological Society of San Diego
Santa Fe Irrigation. Dist.
USMC
AMEC
SD Coastkeeper
CREAC
Trout Unlimited
NWS Seal Beach Det Fallbrook
Southern California Edison
FMA
County of San Diego
EMA/Resource Conservation District
City of Carlsbad
City of Dana Point
City of San Diego
Storm Water Compliance

**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS
FOR THE PERIOD OF MAY 1, 2007 THROUGH MAY 31, 2007**

DATE	APPLICANT	PROJECT TITLE	PROJECT DESCRIPTION	WATERBODY	IMPACT (Acres) ¹	MITIGATION (Acres) ¹	CERTIFICATION ACTION ²
5/7/07	Reynolds Communities Inc., El Cajon	Ambiance	A residential development of approximately 27 acres into 20 lots.	Unnamed tributary to the San Diego River	0.04 acre of Wetlands (P).	Purchase of 0.08 acre of wetland creation credits from Rancho Jamul Mitigation Bank.	Technically Conditioned Certification & Waiver of Waste Discharge Requirements
5/11/07	Lennar Homes, French Valley	Spencer's Crossing	The construction of the pipeline disturbing two drainages and installing a new culvert in one drainage constitutes a discharge of fill material which could negatively affect the quality of the waters of the State. This discharge of fill material was in violation of Sections 13260(a) and 13376 of the Water Code because Lennar Homes failed to file a report of waste discharge and failed to obtain a Corps Section 404 permit from the U.S. Army Corps of Engineers and a Section 401 Water Quality Certification from the Regional Board.	Unnamed drainages.	0.005 acre of Streambed (P).	Add 0.06 acre of alkali habitat in the low flow area and 0.03 acre of riparian habitat at the nearby Spencer's Crossing mitigation site; Remove 2 pepper trees and 7 eucalyptus trees from an area adjacent to the mitigation area; Purchase 0.10 acre of credits from the Santa Margarita Weed Management Program of the Mission Resource Conservation District.	Cleanup and Abatement Order (in lieu of Certification)

**CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION ACTIONS
FOR THE PERIOD OF MAY 1, 2007 THROUGH MAY 31, 2007**

1. Wetland refers to vegetated waters of the U.S. and streambed refers to unvegetated waters of the U.S. (P) = permanent impacts. (T) = temporary impacts.
2. Low impact certification is issued to projects that have minimal potential to adversely impact water quality. Conditional certification is issued to projects that have the potential to adversely impact water quality, but by complying with technical conditions, will have minimal impacts. Denials are issued when the project will adversely impact water quality and suitable mitigation measures are not proposed or possible. Time expired refers to projects that may proceed due to the lack of an action by the Regional Board within specified regulatory timelines. Withdrawn refers to projects that the applicant or Regional Board have withdrawn due to procedural problems that have not been corrected within one year.

Number of Projects Received Between May 1, 2007 and May 31, 2007: 6

Number of Projects Received Between January 1, 2007 and May 31, 2007: 47

Number of Certification Issued Between January 1, 2007 and May 31, 2007: 26

Number of Projects Withdrawn Between January 1, 2007 and May 31, 2007: 1

Number of Projects Where Time-Expired Between January 1, 2007 and May 31, 2007: 4

Number of Projects Denied Between January 1, 2007 and May 31, 2007: 0

Significant Enforcement Actions in May 2007

Agency/Entity: Facility:	Fallbrook Public Utilities District, Fallbrook Land Outfall, Fallbrook	5/3/2007
Program:	NPDES	
Enforcement Action:	Investigative Order	
Description:	<p>Issued to investigate a significant sewage discharge that occurred April 21, 2007, which discharged approximately 135,000 gallons spill of tertiary treated wastewater effluent caused by a break in a section of sewer pipe at the intersection of Oceanside Blvd and Cleveland Street in Oceanside. The wastewater discharged to the Pacific Ocean via a storm drain.</p> <p>A detailed report describing details of the Utilities District's actions related to the spill was required by May 23, 2007.</p>	

Agency/Entity: Facility:	City of San Marcos, Bradley Park Landfill San Marcos	5/14/2007
Program:	401 Water Quality Certification	
Enforcement Action:	Investigative Order	
Description:	<p>Issued to investigate grading and filling within a stream, considered waters of the US, adjacent to the former landfill that has been redeveloped into a City Park.</p> <p>A detailed report describing details of the City's actions related to the spill is required by July 13, 2007.</p>	

Agency/Entity: Facility:	Rancho CA Water District Sewage Collection System, Temecula	5/14/2007
Program:	Sanitary Sewer Overflow	
Enforcement Action:	Investigative Order	
Description:	<p>Issued to investigate a significant sewage discharge that occurred on May 5 and 6, 2007, which discharged approximately 158,000 gallons of raw sewage. The wastewater entered a catch basin that is tributary to Murrieta Creek.</p> <p>A detailed report describing details of the Water District's actions related to the spill was required by June 1, 2007.</p>	

Agency/Entity: Facility:	USMC, Las Pulgas Landfill Camp Pendleton	5/9/2007
Program:	Land Disposal	
Enforcement Action:	Addendum to Cleanup and Abatement Order	
Description:	<p>Addendum was issued to update/clarify directives in a Cleanup and Abatement that was issued on May 9, 2007 for defects in the landfill liner system of the Phase 1 portion of the landfill.</p> <p>The petition period to contest the Order expired on May 13, 2007.</p>	

Agency/Entity: Facility:	Dickerson, et al, Seawall construction and rip-rap removal project, 501 and 505 First Street, Coronado	5/10/2007
Program:	Water Act Section 401 Certification	
Enforcement Action:	Addendum to Cleanup and Abatement Order	
Description:	<p>The second addendum was issued to address the continued discharge of unauthorized fill into San Diego Bay as a result of violation of the Clean Water Act for the removal of rip rap protecting the shoreline of San Diego Bay and for construction of a seawall within waters of the US.</p> <p>A hearing on this Order is scheduled for the June 13, 2007 Regional Board meeting.</p>	

Agency/Entity: Facility:	Gunnings, et al, Seawall construction and rip-rap removal project, 501 and 505 First Street, Coronado	5/10/2007
Program:	Water Act Section 401 Certification	
Enforcement Action:	Addendum to Cleanup and Abatement Order	
Description:	<p>The second addendum was issued to address the continued discharge of unauthorized fill into San Diego Bay as a result of violation of the Clean Water Act for the removal of rip rap protecting the shoreline of San Diego Bay and for construction of a seawall within waters of the US.</p> <p>A hearing on this Order is scheduled for the June 13, 2007 Regional Board meeting.</p>	

Agency/Entity: Facility:	Lennar Homes, Spencer's Crossing Temecula	5/11/2007
Program:	Water Act Section 401 Certification	
Enforcement Action:	Cleanup and Abatement Order	
Description:	<p>Issued to require corrective measures resulting from unauthorized filling and impacts to waters of the US. The Cleanup Order requires mitigation of 0.9 acres of habitat that was disturbed during installation of a 27 inch sewer line across two drainages as part of a 600 acre development.</p> <p>The petition period to contest the Order expires on June 11, 2007.</p>	

Agency/Entity: Facility:	South Orange County Water Authority, San Juan Creek Ocean Outfall San Juan Capistrano	5/9/2007
Program:	NPDES	
Enforcement Action:	Administrative Civil Liability Order	
Description:	<p>On May 9, 2007, the Regional Board adopted an Order imposing \$36,000 administrative civil liability for violations of effluent limitations contained in the NPDES permit for this facility. The liability included payment of \$10,500 to the State Board and \$25,500 to fund an expanded Doheny Epidemiology study in ocean waters adjacent to the San Juan Creek Ocean Outfall.</p> <p>The Water Authority has made full payment to fulfill its obligation required by the Order.</p>	

The following websites provide additional information about steelhead and steelhead recovery efforts in the San Diego region.

Steelhead overview

http://www.southcoasttu.org/site_graphics/sjc-english.pdf
http://www.dfg.ca.gov/Mrd/status/steelhead_rainbow_trout.pdf
<http://www.tucalifornia.org/socalsteelhead.htm>

San Juan Creek / Trabuco Creek

<http://www.tucalifornia.org/051118-LATimes-OCart.pdf>
<http://www.wcb.ca.gov/Pages/wcbprojectgallery.html>
www.tu.org/sanjuansteelhead

San Mateo Creek / San Onofre Creek

<http://www.tucalifornia.org/sanmateo-proj.htm>
<http://www.signonsandiego.com/news/northcounty/20070418-9999-1m18creek.html>
http://www.nctimes.com/articles/2007/04/17/news/top_stories/23_29_564_16_07.txt

San Luis Rey River

http://www.nctimes.com/articles/2007/04/08/news/sandiego/12_79_414_7_07.txt

National Marine Fisheries Service

http://swr.nmfs.noaa.gov/recovery/Steelhead_SCS.htm
http://www.nctimes.com/articles/2007/04/13/news/top_stories/1_03_214_12_07.txt

File 06-0039.02
✓ JRC

STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 93-42

DETERMINATION THAT THE TENTATIVE AUTHORITY TO
CONSTRUCT THE SOLID WASTE LANDFILL
ON THE CAMPO INDIAN RESERVATION MEETS
THE REQUIREMENTS OF CHAPTER 805 OF THE 1991 STATUTES

WHEREAS:

1. The State of California and the Campo Environmental Protection Agency (CEPA) entered into a Cooperative Agreement, pursuant to Chapter 805 of the 1991 Statutes, on December 10, 1992.
2. Chapter 805 and Cooperative Agreement Section VI provide that the State Water Resources Control Board (State Water Board) and other state agencies shall review any draft tribal permit.
3. Chapter 805 and Cooperative Agreement Section VI also provide that the State Water Board and other state agencies shall determine whether the draft tribal permit contains conditions sufficient to:
 - a. Meet the functionally equivalent standards provided in appropriate sections of the CEPA Solid Waste Code and Regulations; and
 - b. Provide not less than the level of protection for public health, safety, and the environment that would have been achieved if that State Agency had issued the permit; and
 - c. Implement all feasible mitigation measures.
4. CEPA utilizes a multi-step permitting process which includes consideration of a tentative authority to construct followed by application for an operating permit.
5. CEPA submitted a Tentative Authority to Construct application on December 2, 1992 for review by the State Water Board.
6. On April 2, 1993, a State Water Board staff workshop was conducted in San Diego to receive comments on the water quality aspects of the Tentative Authority to Construct.
7. The Division of Clean Water Programs has reviewed the Tentative Authority to Construct, the application, and comments received at the State Water Board staff workshop on April 2, 1993, and correspondence from CEPA.
8. The Division of Clean Water Programs prepared a Staff Review, dated April 9, 1993, which recommends that if the issues concerning liner design and slope stability are addressed as

recommended in the Staff Review, then the Tentative Authority to Construct will meet the requirements of Chapter 805 related to the construction of a landfill.

9. On April 23, 1993, the operator submitted a slope stability report.
10. On April 27, 1993, the operator submitted a letter which made a commitment to install an additional liner component at the site.
11. At the April 27, 1993, State Water Board meeting, concerns were raised about the adequacy of commitments for an alternative water supply as a mitigation measure.
12. This determination of sufficiency is not subject to review pursuant to the California Environmental Quality Act (Public Resources Code Section 44203(g)).

THEREFORE BE IT RESOLVED THAT:

The State Water Board finds:


1. The Tentative Authority to Construct should be treated as a draft tribal permit under the terms of Chapter 805 and the Cooperative Agreement.
2. The integrity of the slope stability cannot be evaluated by the State Water Board without additional time and possibly more information from CEPA. Therefore, a determination cannot be made at this time with respect to the stability of the project.
3. If the liner design is modified as presented in the operator's April 27, 1993 letter, staff concerns will be addressed.
4. That the provision for an alternative water supply of the same quality and quantity is a feasible mitigation measure which shall be required prior to the operation of the project. The requirement to provide an alternative water supply of the same quality and quantity shall extend, for any and all uses, to any surrounding or adjacent property owners whose water supply may be adversely impacted by the construction, operation or maintenance of the landfill. The alternative water supply shall be funded by an acceptable mechanism, or combination of mechanisms, outlined in Campo Code of Regulations Subpart H Section 530.91 et seq.
5. If the liner design, slope stability and the provision for an alternative water supply are implemented as set forth above, then the Tentative Authority to Construct will meet the

requirements of Chapter 805 and Section VI of the Cooperative Agreement related to the construction of a landfill. The Tentative Authority to Construct will contain conditions sufficient to:

- a. Meet the functionally equivalent standards provided in appropriate sections of the CEPA Solid Waste Code and Regulations.
- b. Provide not less than the level of protection for public health, safety and the environment that would have been achieved if the State Water Board had issued the permit.
- c. Implement all feasible mitigation measures.

CERTIFICATION

The undersigned, Administrative Assistant to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted at a meeting of the State Water Resources Control Board held on April 27, 1993.


Maureen Marché
Administrative Assistant
to the Board

STAFF REVIEW
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF CLEAN WATER PROGRAMS
2014 T Street
Sacramento, CA 95814
April 9, 1993

SUBJECT: Technical Evaluation of the Application for the **Proposed Campo Landfill** (Applicant) as Submitted by Mid-American Waste Systems, Inc. to the Campo Environmental Protection Agency (CEPA)

SUMMARY OF STAFF REVIEW CONCLUSIONS

GENERAL COMMENTS

The review of the application was done in view of CEPA's sequential permitting process. An "authority to construct" (ATC) is to be issued prior to a "permit to operate" under the two-stage permitting process. Construction Work Plans prepared by the construction contractors for the liner installation and for the water quality monitoring and reporting program will also be reviewed in cooperation with CEPA. Additional comments resulting from these future reviews, similar to this set of review comments, are intended to provide guidance and support to CEPA in their regulatory program.

Although a number of issues of concern have been identified in this review, such issues are believed to be resolvable because they 1) have been adequately addressed by the ATC permit conditions, or 2) can be addressed during review of Construction Work Plans in the Applicant's submission of an application for a permit to operate.

A number of issues relating to the operation of the landfill were deferred to the next phases of the review process. These include the final detection monitoring and reporting program, ground water remediation contingency plans, and the statistical approach used to assess the water quality monitoring data.

Our primary comment and concern relates to detection monitoring or the ability to detect releases from the proposed landfill. The fractured rock underlying the landfill site reduces the effectiveness of monitoring wells. We note, however, that the proposed landfill design includes a liner system that exceeds the minimum state and federal requirements. With the proposed double liner system, the lower liner could be considered to be a leak detection (monitoring) system. Appropriately located monitoring wells would then serve as an additional monitoring system. (Although composite liners are designed to preclude releases, small flaws in the flexible synthetic membrane could allow "point source" releases of leachate. It is our judgement that such point source releases which could be produced by a composite liner would be more reliably detected by an underlying detection system than by the more traditional monitoring well system.)

In order to consider the lower liner as a leak detection system, the upper liner must be considered the primary containment system and should be of composite design. In the proposed design, the upper liner consists of a flexible membrane (60 mil HPDE). We do not believe that such a liner would provide adequate primary containment. We also do not believe that such a liner would be considered acceptable under the federal Subtitle D regulations as a primary containment system.

It may be possible to reverse the proposed upper and lower liners to place the composite liner on top, although this may entail construction difficulties. Another approach might be to design a double composite liner system which would include a geomembrane composite liner (a clay mat between geofabric) under the 60 mil HDPE upper liner. Either such modification (or others) would meet the State's and the Subtitle D requirements for containment and allow the lower liner to serve as a leak detection system.

In summary, to ensure adequate and effective monitoring, the proposed liner system should be modified to have the lower liner function as a leak detection system and the upper (composite) liner function as the primary containment system.

Additional comments regarding liner design, liner and slope stability and the ground water monitoring program follow.

LINER DESIGN

- 1) Data available through March 30, 1993 indicate that although water levels have risen significantly, there is adequate separation between the ground water table and the proposed landfill liner. The Applicant should document more recent water elevation measurements in the Construction Work Plan including highest and lowest annual elevations to supplement the data contained in Volume 1, Appendix E (Binder 3). Subsequent water level elevation taken by the Applicant should also demonstrate that the highest anticipated ground water elevation will not be within five feet of the lower liner system.
- 2) High localized short-term ground water pressure gradients along high permeability zones above the water table could damage portions of the liner system. The Applicant should demonstrate in the Construction Work Plan the relative stability of the liner if such conditions occur and, if warranted, present mitigation measures to protect the liner system from such shallow water conditions.

LINER AND SLOPE STABILITY

We could not properly evaluate individual slope stability analyses without a complete description of potential failure surfaces and materials being analyzed,

including cross-sections. The Applicant should provide such information for review.

GROUND WATER MONITORING PROGRAM

The following points should be considered by CEPA in reviewing the Water Monitoring and Reporting Program (WMRP) Work Plan required to be submitted by the Applicant. It is our understanding, based on discussions with CEPA representatives, that CEPA identified similar points during their review of the application and development of the tentative WMRP.

- 1) The WMRP should contain concise summaries of the extensive compilation of hydrologic, geologic, and geophysical data provided in the application to support the site characterization and ground water monitoring network design. The following are recommendations intended to enhance the existing data-base:
 - o Descriptions of geologic materials and structure provided by the Applicant as required by the WMRP Work Plan, particularly for well-completion zones, should be of sufficient detail for necessary review and evaluation purposes.
 - o The WMRP Work Plan should provide detailed summary geologic cross-sections including structural zones, well completion zones, and the range of seasonal ground water table surface elevations for the proposed new locations.
 - o The procedures to further describe and evaluate underlying permeable fractures within the unweathered zone (determined by individual borings) should be demonstrated in the WMRP Work Plan prior to the installation of the monitoring network.
 - o Structural and hydrologic analysis of fracture zones following well installation should be substantiated using borehole geophysical data and especially long-term pumping tests. The analysis should not be based primarily on VLF (very low frequency geophysical) surveys, non-core borehole logging, and drilling rate data.
 - o Additional investigation when the excavation of the site achieves final grade is necessary to identify and evaluate vertical and near-vertical fractures at the site since existing vertical bore holes cannot provide data on fracture density, aperture, and degree of fracture filling.
 - o The proposed evaluation of vertical fractures following site excavation should include angle borings.

- 2) The ability to accurately monitor the site strongly depends upon the characterization of the upper weathered zone.

The WMRP Work Plan should further define at what depths the weathered tonalite (granitic type rock) first begins to behave like a fracture flow medium. The Applicant should provide additional data from the construction phase of the project to support the case that the fractured bedrock portion of the aquifer acts as a granular porous medium over each monitored phase of the landfill.

The WMRP Work Plan should provide for testing to accurately locate the elevation or depth where rock discontinuities begin to control ground water flow. Additionally, criteria used to assess ground water flow should be based on site specific test data as much as possible.

- 3) A generalized hydrogeologic characterization is provided for the entire site. Based upon data obtained from monitoring well installation and carefully designed aquifer tests, the WMRP Work Plan should provide more complete hydrogeologic site characterization. The characteristics should include data on site-wide flow directions and velocities in both weathered and unweathered materials and for all appropriate aquifer depths to confirm the effectiveness of the monitoring program. The testing methodology should also be documented in the WMRP Work Plan.

An ephemeral spring exists downslope of the proposed landfill. The WMRP Work Plan should provide a cross-section(s) showing maximum ground water table elevations corresponding to flows in the spring. Water quality data should also be included in the analysis to assess the role of the spring in the monitoring network.

- 4) The aforementioned additional hydrologic data is necessary to support the monitoring system performance and effectiveness prior to the acceptance of a final ground water monitoring system. The Applicant states that additional testing will be performed during well construction and used to verify the proposed design. A number of recommendations follow:
- o The four constant discharge aquifer tests performed did not use wells screened to isolate discrete parts of the aquifer and hence cannot accurately describe flow within the fractured rock system. The Applicant should use a more effective design to obtain representative results.
 - o To properly design and test the monitoring well network, additional pumping tests should be performed, particularly along prominent fracture zones traversing the site.

5

- o Pumping tests should be performed particularly within high permeability zones to provide assessment of whether hydraulic interconnection exists along east-west trending (in addition to other azimuths) fracture sets. In designing pumping tests, the influence of fractures and hydraulic conditions (e.g. convergent flow) should be evaluated by the Applicant. The Applicant should provide a summary explanation of test design and intent including accurate screen locations/interval data for pumping and observation wells for the proposed construction phase testing.
- o Information contained in the application calls for incorporation of packers in bore holes to isolate high permeability zones as part of future aquifer testing. Specific details need to be provided in the Work Plan.
- o Additional tracer tests could be performed to help determine flow directions, overall travel time, and degree of hydraulic connection. The need for tracer tests would depend on the success of other test methods described above.