CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER NO. 5-00-703
FOR
U. S. DEPARTMENT OF INTERIOR
NATIONAL PARK SERVICE
YOSEMITE NATIONAL PARK
EL PORTAL WASTEWATER TREATMENT FACILITY
MARIPOSA COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. The U.S. Department of Interior, National Park Service (NPS), Yosemite National Park (hereafter Discharger or NPS) owns and operates the El Portal wastewater treatment facility (WWTF) and provides sewerage service to the community of El Portal and Yosemite Valley. The WWTF is within Section 18, T3S, R20E, MDB&M. Peak flows occur during spring and summer and are produced mostly by visitors to Yosemite Valley. Tertiary treated and disinfected wastewater is discharged to evaporation-percolation ponds or to the Merced River. Runoff from the WWTF site is collected by a storm sewer system that discharges to the Merced River at the Foresta Bridge.

2. The Merced River is a water of the United States and the State. The beneficial uses of the Merced River from Yosemite Valley to Lake McClure are municipal and agricultural supply; water contact and noncontact water recreation; ground water recharge; hydroelectric power generation; warm and cold freshwater habitat; and wildlife. The Merced River is designated a Wild and Scenic river.

3. On 24 March 1995, the Board adopted Waste Discharge Requirements (WDRs) Order No. 95-060 (NPDES No. CA0081759) for the WWTF. The WWTF treatment units include primary clarification, flow equalization, activated sludge, coagulant and polymer injectors, rapid mixing, flocculation, final sedimentation, sand filtration, disinfection, and dechlorination. Discharge to the river occurs directly on infrequent occasions and indirectly through seepage from three evaporation-percolation ponds most of the time. On 23 February 2000, Board staff administratively extended Order No. 95-060, which was scheduled to expire on 1 March 2000, until the permit is renewed.

4. Order No. 95-060 states, in part, that:

"A. Discharge Prohibitions:
"2. The by-pass or overflow of wastes to surface waters is prohibited, ..."

"D. Receiving Water Limitations:
"The discharge shall not cause the following in receiving water:"

"14. The fecal coliform concentration in any 30-day period to exceed a geometric mean of 50 MPN/100 ml or cause more than 10 percent of total samples to exceed 110 MPN/100 ml."

"18. Violations of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board pursuant to the CWA and regulations adopted thereunder.

"F. Provisions:

"2. The Discharger shall comply with all the items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES)," dated 1 March 1991, which are part of this Order."

"6. The Discharger shall implement, as more completely set forth in 40 CFR 403.5, the necessary legal authorities, programs, and controls to ensure that the following incompatible wastes are not introduced to the treatment system, where incompatible wastes are:

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c. Solid or viscous wastes in amounts which cause obstruction to flow in sewers, or which cause other interference with proper operation or treatment works;..."

5. "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (National Pollutant Discharge Elimination System)" (Standard Provisions) referenced above, state, in part, that:

"A. General Provisions:

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"22. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the CWC, Section 13050."

6. During a storm event in early January 1997, flooding caused significant damage to the Yosemite Creek lift station and washed out a portion of the sewage collection line in Yosemite Valley and a 200 yard section of the main sewer line along Highway 140. The Discharger estimated that approximately two million gallons of raw sewage was discharged to the Merced River during this event. Within one week, the Discharger had repaired the lift station and bypassed damaged portions of the sewer line until more permanent repairs could be made. The Board did not pursue enforcement for this release as it was primarily caused by a natural disaster.

7. In July 1997, the NPS in conjunction with the Federal Highway Administration (FHWA) submitted plans to reconstruct 7.5 miles of Highway 140 (El Portal Road) that was damaged during the January 1997 flooding. In conjunction with the road construction project, the NPS proposed to rehabilitate a portion of the main sewer line by slip lining a damaged and corroded portion beneath Highway 140. The road reconstruction and slip lining projects were initiated in early 1999 under the supervision of the NPS and the FHWA. The general contractor for this project is Kiewit Pacific (hereafter contractor).

8. Between April and October 1999, nine sewage spills occurred that were related to the slip lining project. These spills are summarized in the following table.

Construction Related Spills from the Main Sewer Line, Highway 140			
Spill Date	Volume (gallons)	Discharge Location	Cause
16 April 1999	~21,000	Merced River at Cascade Dam	Bypass pump failure
29 April 1999	~100	Merced River at Steamboat Bay	Sewer line blocked by construction debris
19 May 1999	~36,000	Merced River at Cascade Dam	Sewer line blocked by construction debris
4 June 1999	~4,000	Contained to land	Manhole plug failure
10 August 1999	~500/50	500 gallons contained to land, 50 gallons "estimated" to the Merced River at Cascade Dam	Air locked sewer line during pump test
24 August 1999	~1,900/100	1,900 gallons contained to land, 100 gallons to Merced River at Steamboat Bay	Corroded cleanout fitting on old sewer line
13 September 1999	800	Contained to land	Air relief valve failure
21 September 1999	100	Contained to land	Air relief valve failure
5 October 1999	<50	Contained to land	Failed sewer line plug

The 1999 construction related spills resulted in an estimated total of 57,250 gallons of raw sewage being discharged to the Merced River. Staff issued a Notice of Violation on 14 July 1999 for violation of WDRs Discharge Prohibition No. A.2 for spilling sewage to the Merced River. Following a 9 September 1999 meeting, the Discharger submitted a report summarizing the chronology of previous spills and plans and actions to be implemented by NPS, FHWA, and contractor personnel to prevent future spills. Construction related sewage spills that occurred subsequent to the 24 August 1999 spill were contained to land. Further, enforcement was held in abeyance as it appeared that spill prevention and response measures were being properly implemented.

9. The slip-lining project was completed in December 1999. Since March 2000, the Discharger has conducted and/or overseen three flow tests of the main sewer line to determine the operating characteristics of the rehabilitated portion. Numerous small sewage spills reported during the 14 March and 6 June 2000 flow tests were contained to land. One of the spills on 6 June 2000 occurred at the manhole adjacent to the WWTF headworks.

10. During a 27 July 2000 flow test conducted between 12:00 and 6:00 a.m., the Discharger spilled 200,000 gallons, composed of a mixture of raw sewage and fresh water, to the Merced River. Water for the flow test was pumped from Yosemite Creek. The spill occurred from the manhole adjacent to the WWTF headworks and entered the river through the storm sewer system west of the WWTF. The spill was discovered at 6:00 a.m. by WWTF staff arriving for work. The spill was stopped between 7:00 and 8:00 a.m. The spill was caused by construction debris and rocks blocking the sewer line. The Discharger notified state and local regulatory agencies and downstream users on the Merced River of the spill. MCHD closed the river from the Foresta Bridge to Matterhorn Beach

(approximately one mile). Warning signs precluding use of the river were posted from Matterhorn Beach to Briceburg on 27 July 2000. The warning signs and river closure remained in effect until at least 3 August 2000. Preliminary results of bacteria samples, summarized below, indicated that elevated levels of total and fecal coliform were present from the point of discharge to at least seven miles downstream. Due to low flow in the river, 159 cubic feet per second on the morning of the spill, elevated bacteria levels were present for at least three days following the spill. The 27 July 2000 discharge to the Merced River violated WDRs Discharge Prohibition No. A.2 and Receiving Water Limitation No. D.14 and violated or threatened to violate Provision No. F.2 (Standard Provision No. A.22) by creating nuisance and/or pollution conditions.

11. The following table summarizes the analytical results of samples collected from the Merced River by NPS staff between 27 July and 13 July 2000. Pursuant to Mariposa County Health Department recommendations, samples were collected at locations along the river where public contact was most likely to occur.

Locations (relative to discharge)	Date Samples Collected				
	27 July	28 July	29 July	30 July	31 July
	Analytical Results in MPN/100ml (reported on 1 August 2000)				
El Portal Bridge Upstream	TCO: 94 FCO: 5	NS	NS	NS	NS
Foresta Bridge Upstream	TCO: 79 FCO: 2	NS	NS	NS	NS
Red Bud, Point of Discharge	TCO: ≥1,600 FCO: ≥1,600	TCO: ≥1,600 FCO: ≥1,600	TCO: ≥1,600 FCO: 1,600	TCO: ≥1,600 FCO: 1,600	TCO: 1,600 FCO: 1,600
Rope Swing, 0.9 miles downstream	TCO: ≥1,600 FCO: ≥1,600	TCO: ≥1,600 FCO: 79	TCO: 300 FCO: 130	TCO: 170 FCO 27	TCO: 49[1] FCO: 49[1]
Indian Flat, 2.2 miles downstream	TCO: ≥1,600 FCO: ≥1,600	TCO: ≥1,600 FCO: 49	TCO: 130-240[1] FCO: 79	TCO: 130-300[1] FCO: 33-70[1]	TCO: 79[1] FCO: 79[1]
McClendon's Beach, 3.1 miles downstream	TCO: ≥1,600 FCO: ≥1,600	TCO: ≥1,600 FCO: 33	TCO: 170-300[1] FCO: 70	TCO: 170-900[1] FCO: 70-180[1]	TCO: 33[1] FCO: 33[1]
Sammy's Beach, 4.4 miles downstream	TCO: ≥1,600 FCO: ≥1,600	TCO: ≥1,600 FCO: 240	TCO: 240-300[1] FCO: 49	TCO: 46-500[1] FCO: 23-170[1]	TCO: 23[1] FCO: 23[1]
Ned's Gulch, 7 miles down	TCO: 300 FCO: 2	TCO: ≥1,600 FCO: ≥1,600	TCO: 300-1,600[1] FCO: 23	TCO: 110-500[1] FCO: 110-500[1]	TCO: 23[1] FCO: 23[1]
Briceburg, 14.4 miles downstream	NS	NS	NS	NS	TCO: 23[1] FCO: 23[1]
Cable	NS	NS	NS	TCO: 23-170[1] FCO: 13-40[1]	NS
McCabe Flat, 17 miles downstream	NS	NS	NS	NS	TCO: 23[1] FCO: 23[1]

TCO: total coliform organisms
FCO: fecal coliform organisms
NS: location not sampled on this date
[1] unconfirmed preliminary results, analyses have 24 to 72 hours remaining before complete

12. Spills from testing of the main sewer line have been a recurring problem. In planning the 27 July 2000 main sewer line test, the NPS chose not to stage personnel at the WWTF. Since a spill occurred at the manhole adjacent to the headworks during the 6 June 2000 test, the need to stage staff at this location as well as along the run of the sewer line should have been anticipated. According to the information available, it appears that the occurrence and magnitude of the spill was caused largely by failure of NPS staff to adequately man all locations where spills were possible to occur and had occurred in the past. NPS staff was actively involved with spill prevention planning and spill response during the 1999 construction activities. Based upon this experience, NPS staff should have had a heightened awareness of the need for adequate planning and preparation prior to conducting flow tests.

13. Unrelated to the construction and testing activities discussed above, the Discharger has also experienced recurring collection system spills in Yosemite Valley caused by grease and trash clogging the sewer lines. The following table summarizes the history of these types of spills, each of which was contained to land.

Collection System Spills, Yosemite Valley			
Spill Date	Volume (gallons)	Location	Cause
23 April 1998	700	Happy Isles	Toilet paper and grit clogged line
6 July 1998	5,000	Lower River Campground	Grease clogged line
8 July 1999	300	Yosemite Lodge	Grease clogged line
4 September 1999	6,000	Curry Village (ice rink)	Grease clogged line
13 May 2000	7,000	Curry Village	Grease and trash clogged line
9 June 2000	250	Curry Village	Trash clogged line
16 June 2000	200	Curry Village	Trash clogged line

14. In a report discussing the 4 September 1999 spill, the Discharger stated that grease in the collection system is the primary cause of sewage spills in Yosemite Valley. The Discharger stated that in 1993 grease traps were installed throughout the park to mitigate high operations and maintenance costs of removing grease accumulation in the collection system, lift stations, and WWTF. The Discharger stated that in June 1999 Yosemite Valley Utilities began a grease control program by adding bacteria to several of the concessionaire's grease traps and the main lift station. According to the Discharger the grease control program diminished grease build-up at the lodge, the Ahwahnee hotel, and the lift station but did not improve conditions in Curry Village. Apparently kitchen procedures at the Curry Cafeteria include wasting hot water down the drain, preventing the grease traps from working properly. As an alternative measure, the Discharger cleans the grease traps at the Curry Village facilities once every six months.

15. Collection system spills in Yosemite Valley due to grease and trash clogs have been a recurring problem, despite the installation of grease traps and implementation of a grease control program.

Provision No. F.6 of the WDRs requires the Discharger to implement the necessary legal authorities, programs, and controls to ensure that incompatible wastes are not introduced to the treatment system. Grease and trash are considered incompatible wastes where they cause obstruction of flow in the sewers. Since these types of spills continue to occur, it does not appear that the Discharger has implemented a program sufficient to comply with Provision No. F.6.

16. Section 13304(a) of the California Water Code provides that:

> "...any person who has discharged or discharges waste into the water of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board, clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action ..."

17. Section 13267(b)(1) of the California Water Code provides that:

> "... in conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges or is suspected of discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges or is suspected of discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports."

18. The Discharger has been in violation of WDRs Order No. 95-060. Continuing discharges and threatened discharges of untreated wastewater to the surface waters and land represent a threat to beneficial uses of the Merced River and to the public health.

19. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt for the provisions of the California Environmental Quality Act, pursuant to Section 15321(a)(2), Title 14, California Code of Regulations.

20. Any person affected adversely by this action of the Board may petition the State Water Resources Control Board to review the action. The State Board must receive the petition within 30 days of the date on which the Board took action. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED, pursuant to Sections 13304 and 13267 of the California Water Code, that the U.S. Department of the Interior, National Park Service shall:

1. Employ whatever means are necessary to abate discharges of untreated wastewater from the El Portal WWTF and its sewer lines in violation of Order No. 95-060 (NPDES No. CA0081759) and subsequent WDRs that may be issued for this site.

2. Submit to the Board by **16 August 2000**, a written technical report addressing actions taken during the 27 July 2000 sewer line flow test and subsequent spill. The report shall include a detailed description of actions taken during and after the spill, including any monitoring data collected and a site plan illustrating the spill path to the river. Further, the report shall include a detailed discussion of proposed changes to the Spill Prevention and Response Plan to address fully the sewer line testing activities. The proposed changes shall address improving notification procedures and implementing receiving water monitoring consistent with Order No. 95-060.

3. Submit to the Board **at least 10 days** prior to initiating each future sewer line flow test, a written report that includes notification of the scheduled test, and plans identifying the test area and vulnerable points and addressing the proposed flow test parameters and sewer system monitoring activities during the test.

4. Submit to the Board by **1 November 2000**, an engineering report addressing the operating characteristics and actual peak flow capacity of the main sewer line. The report shall relate the results of the flow tests to historical sewer line flows to determine if the rehabilitated sewer line provides adequate flow capacity to meet peak seasonal flows. The report shall be properly signed and stamped by a California registered civil engineer. If additional flow tests are conducted subsequent to 31 October 2000, the Discharger shall revise the above report using the most recent data and submit the revision within 30 days of each test.

5. Submit to the Board by **31 August 2000**, a written technical report of measures taken and planned to prevent spills related to grease and trash clogs in the Yosemite Valley sewage collection system, including further pretreatment requirements, if necessary. The report must include an implementation schedule for each measure proposed.

No term or condition of WDRs Order No. 95-060 is modified or suspended by this Order.

All submitted plans and/or reports are subject to approval of the Executive Officer. Conditions of approval to effect compliance with this Order shall be considered an enforceable part of this Order.

GARY M. CARLTON, Executive Officer

by: _____
LOREN J. HARLOW, Assistant Executive Officer

PAJ/fmc:8/2/2000