

Participating Organizations

Alliance for a Living Ocean
American Littoral Society
Arthur Kill Coalition
Asbury Park Fishing Club
Bayberry Garden Club
Bayshore Saltwater Flyrodders
Belford Seafood Co-op
Belmar Fishing Club
Beneath The Sea
Bergen Save the Watershed Action Network
Berkeley Shores Homeowners Civic Association
Cape May Environmental Commission
Central Jersey Anglers
Citizens Conservation Council of Ocean County
Clean Air Campaign
Coalition Against Toxics
Coalition for Peace & Justice
Coastal Jersey Parrot Head Club
Coast Alliance
Communication Workers of America, Local 1034
Concerned Businesses of COA
Concerned Citizens of Bensonthurst
Concerned Citizens of COA
Concerned Citizens of Montauk
Dossil's Sea Roamers
Eastern Monmouth Chamber of Commerce
Environmental Response Network
Explorers Dive Club
Fisheries Defense Fund
Fishermen's Dock Cooperative
Fisher's Island Conservancy
Friends of Island Beach State Park
Friends of Liberty State Park
Friends of Long Island Sound
Friends of the Boardwalk
Garden Club of Englewood
Garden Club of Fair Haven
Garden Club of Long Beach Island
Garden Club of Morristown
Garden Club of Navesink
Garden Club of New Jersey
Garden Club of New Vernon
Garden Club of Oceanport
Garden Club of Princeton
Garden Club of Ridgewood
Garden Club of Rumson
Garden Club of Short Hills
Garden Club of Shrewsbury
Garden Club of Spring Lake
Garden Club of Washington Valley
Great Egg Harbor Watershed Association
Highlands Business Partnership
Highlands Chamber of Commerce
Hudson River Fishermen's Association/NJ
Interact Clubs of Rotary International
Jersey Coast Shark Anglers
Jersey Shore Audubon Society
Jersey Shore Captains Association
Jersey Shore Running Club
Junior League of Monmouth County
Junior League of Summit
Kiwans Club of Manasquan
Kiwans Club of Shadow Lake Village
Leonardo Party & Pleasure Boat Association
Leonardo Tax Payers Association
Main Street Wildwood
Marine Trades Association of NJ
Monmouth Conservation Foundation
Monmouth County Association of Realtors
Monmouth County Audubon Society
Monmouth County Friends of Clearwater
Monmouth Fisherman's Emergency Fund
National Coalition for Marine Conservation
Natural Resources Protective Association
Navesink River Municipalities Committee
Newcomers Club of Monmouth County
NJ Beach Buggy Association
NJ Commercial Fishermen's Association
NJ Council of Dive Clubs
NJ Environmental Federation
NJ Environmental Lobby
NJ Marine Educators Association
NJ PIRG Citizen Lobby
NJ Sierra Club
NJ Windsurfing Association
Nottingham Hunting & Fishing Club
NYG Sea Gypsies
NY/NJ Baykeeper
NY Marine Educators Association
Ocean Advocates
Ocean Conservancy
Ocean County Citizens for Clean Water
Ocean Divas
Ocean Wreck Divers
Outreach/First Presbyterian Church of Rumson
Piscataway Saltwater Sportsmen Club
Raritan Riverkeeper
Riverside Drive Association
Rotary Club of Long Branch
Saint George's by the River Church, Rumson
Saltwater Anglers of Bergen County
Sandy Hook Bay Catamaran Club
Save Barnegat Bay
Save the Bay
SEAS Monmouth
Seaweeders Garden Club
Shark River Cleanup Coalition
Shark River Surf Anglers
Sheepshead Bay Fishing Fleet Association
Shore Adventure Club
Shore Surf Club
Sierra Club, Shore Chapter
Soroptimist Club of Cape May County
South Monmouth Board of Realtors
Staten Island Friends of Clearwater
Strathmere Fishing & Environmental Club
Surfers' Environmental Alliance
Surfider Foundation, Jersey Shore Chapter
TACK 1
Terra Nova Garden Club
Unitarian Universalist Congregation of Mon. County
United Boatmen of NY/NJ
United Bowhunters of NJ
Volunteer Friends of Boaters
Waterspirit
Women's Club of Brick Township
Women's Club of Keyport
Women's Club of Long Branch
Women's Club of Merchantville
Zen Society

Clean Ocean Action



Ocean Advocacy
Since 1984

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October 28, 2008

Jeffrey Reading

Assistant Director, Bureau of Point Source Permitting Region 1

P.O. Box 029

Trenton, NJ 08625

RE: DRAFT NJPDES RENEWAL PERMIT FOR THE ASBURY PARK WASTEWATER TREATMENT FACILITY, NJPDES PERMIT # NJ0025241.

VIA EMAIL AND MAIL

Dear Mr. Reading:

Clean Ocean Action is a regional, broad-based coalition of over 125 conservation, environmental, fishing, boating, diving, student, surfing, women's, business, service, and community groups with a mission to improve the degraded water quality of the marine waters of the New Jersey/New York coast. These comments are in response to the draft New Jersey Pollutant Discharge Elimination System (NJPDES) permit # NJ002 for the Asbury Park Central Water Pollution Control Facility to discharge to surface water. The effluent from this facility is discharged into the Atlantic Ocean approximately 1,500 feet offshore at Latitude 40° 13' 37.0" Longitude 73° 59' 33.5". The draft permit also contains conditions allowing the permittee to beneficially reuse treated effluent for restricted on-site only purposes at this time. Clean Ocean Action (COA) has reviewed the draft permit and for the reasons cited below, we urge the Department not to approve it until the permit is rewritten to be more protective of coastal water quality.

Flow Capacity: High daily maximum indicates need for numerical flow limitations.

The facility's 12-month average flow of 2.4 MGD is within its designated flow capacity of 4.4 MGD, but the reported daily maximum of 8.2 MGD exceeds the flow design by 3.8 MGD. In fact, according to the posted online Discharge Monitoring Report (DMR)¹ from this facility's, the daily maximum was actually 8.277, which rounds up to 8.3. The correct value of 8.3 MGD must be reported on the permit data summary table. COA also requests additional information on this significant exceedance, including information on whether this facility was able to adequately process this excess flow? Was this discharge only partially treated? Was the New Jersey Department of Environmental Protection (herein the "Department") informed of the exceedance? Does the facility have a specific operating procedure to handle such exceedances? Was the cause ever identified? Was a solution developed to prevent future exceedances? While the Capacity Assurance Program as described in Part IV E in the permit addresses capacity problems over

¹ NJPDES DMR Data (1/31/2003-1/31/2008)

http://datamine2.state.nj.us/DEP_OPRA/OpraMain/get_long_report? (last visited October 28, 2008).

multiple months, no requirements are included that addresses very high daily maximum exceedances.

COA strongly objects the Department's contention that "flow is a redundant factor."² Mass and concentration limits alone are not protective of receiving waters. New Jersey's coastal waters are entitled to the same level of protection afforded the state's other important ecological resources such as the Pinelands and the Great Swamp, therefore numerical flow limitations need to be reinstated for ocean dischargers to ensure that wastewater is properly treated before being released into our coastal waters.

Bacterial Indicators: The Department must expedite the inclusion with enterococci as a bacterial indicator and require effluent limitations for enterococci before the next permit review period, and maintain fecal coliforms for shellfish monitoring requirements. The Surface Water Quality Standards, N.J.A.C. 7:9B, were recently amended to replace fecal coliforms with enterococci in marine waters. We understand the Department has concerns about the frequency and magnitude of unexplained enterococci spikes and that prior to the 2007 EPA adoption of Method 1600, this facility used a different method for determining enterococci data. But, we strongly oppose the Department's decision to postpone enforcement of any enterococci limitation for an entire 5-year permit cycle based on the need to assess the correlation between enterococci and fecal coliform data.

The replacement of fecal coliforms with enterococci has been endorsed by the United States Environmental Protection Agency (US EPA) and methods for detecting enterococci in wastewater have been approved (40 CFR Parts 136 and 503). Additional comparative testing is unnecessary and redundant. Therefore, the Department has a responsibility to enforce the state's surface water quality standards in wastewater effluent and must do so in a timely manner. Any issues concerning the validity of the correlation between fecal coliforms and enterococci should be taken up by the wastewater treatment operators. The Department must establish enterococci effluent limitations in this permit.

The need for enforceable limits on enterococci is apparent when reviewing this facility's data summary and DMR.³ While the monthly average of enterococci geometric mean (19.7 cells/100 ml) is sufficient with most samples <10 cells/100 ml, two months did have geometric means of 600 cells/100 ml and 230 cells/100 ml. These exceedances of the Surface Water Quality Standard, which is a geometric mean of 35 cells/ 100 ml, are cause for concern as effluent was released without adequate treatment.

COA would like to emphasize that it is the NJPDES permittee's responsibility to meet the SWQS for both bacteria and chlorine producing oxidants (CPOs). This may require the dechlorination of the effluent prior to discharge or the utilization of alternative disinfection methods that do not produce toxic chlorine residuals or byproducts.

² NJDEP 2008. Final New Jersey Pollutant Discharge Elimination System (NJPDES) permit action for Ocean County UA. Permit No. NJ0029408. Sept. 29, 2008.

³ NJPDES DMR Data (1/31/2003-1/31/2008) http://datamine2.state.nj.us/DEP_OPRA/OpraMain/get_long_report? (last visited October 28, 2008).

In addition, without an enterococci limitation in NJPDES permits, the Department will not be able to “develop total maximum daily loads (TMDLs) and to regulate wastewater discharges” in accordance with SWQ Criteria. Importantly, if enterococci does replace fecal coliforms, how does the Department intend to address TMDLs required for shellfish impairments in marine waters?

Effluent Monitoring: The frequency of sampling contaminants needs to be increased.

WET testing should be conducted monthly or at least quarterly, as semiannual and annual requirements are inadequate to assess effluent toxicity. The frequency of toxic metals, organic compounds and cyanide should all be tested at least quarterly.

COA continues to urge the Department to reject the “allowance” of a mixing zone when developing all WQBELs because of the harm mixing zones present to marine life. This is never more apparent than for CPO, as chlorine residual can be acutely toxic within minutes of exposure to fish and other aquatic life (see Section A below for more details). The Surface Water Quality Criteria at N.J.A.C. 7:9B-1.5(h)1. provide very specific requirements that must be met in order for the allowance of mixing zones, including:

- ii. “[S]urface water quality criteria must be met at the edge of the regulatory mixing zone.”
- v. “Regulatory mixing zones shall be established to assure that significant mortality does not occur to free swimming or drifting organisms”
- ix. “The regulatory mixing zone shall not inhibit or impede the passage of aquatic biota.”

We request copies of all studies that are being used by this facility to prove the above listed requirements are being met within the mixing zone. Specifically, has there been any analysis of water or sediment samples from the discharge site and mixing zone that supports that the above requirements are indeed being met and that marine life is not being negatively impacted?

Contaminant Specific Issues with Effluent Monitoring:

A. Chlorine Producing Oxidants (CPO):

1. The summary table needs to be clarified. The concentration listed for the monthly average, 2.2 mg/L, is greater than the daily maximum, 1.1 mg/L, which is not logical and is inconsistent with the CPO data given in kg/d.
2. COA requests the information used to grant the facility a retroactive stay of final effluent limitations for CPO in 2007. It is not clear from this permit what the “several pieces of information that justified a modification of the final CPO limits” are. Does this include the demand study submitted by NJ Ocean Dischargers? What other information does this include? In fact, the Department increased the CPO limitations in this permit to 2.1 mg/L monthly average and 5.1 daily maximum, due to the allowance of mixing zones and CPO demand and decay. This monthly average limitation is **280 times** higher than New Jersey’s chronic CPO SWQ, 0.0075 mg/L for saline waters and is not protective of marine life. CPO’s are known to be highly toxic to marine organisms and even at very low concentrations result in both acute and chronic effects. The silverside (*Menidia menidia*), a fish that is present in New Jersey marine waters, is considered one of the most sensitive marine/estuarine species (96-hour LC₅₀

0.040 mg/L).⁴ Does the Department have any field data (not modelling based) from the discharge area or mixing zone that show marine life is not affected and that limits at the mixing boundary are being met?

3. The 3-year delay in implementing a CPO standard is unacceptable. What is the justification for such a protracted implementation schedule? Especially given that the limits are higher than those established in the previous permit (0.65 mg/l)? Effluent discharged into the Atlantic from this facility averages 27.5 times higher than the LC50 for menidia (monthly average CPO = 1.1 mg/L)⁵, assuming the maximum and average were reversed in the summary table) and the proposed daily maximum in the draft permit is 55 times higher. CPOs have been found to reduce filtration and reproduction in rotifers, lobsters and fish.⁶ In fish, CPO can affect the transport of oxygen in blood by reacting with the hemoglobin of the red blood cells to form methemoglobin, inhibiting the cell's ability to bind oxygen.⁷ As CPO concentrations are increased, severe hemorrhaging occurs throughout the body and from the fins. In addition, the body of the fish becomes covered with a mucous coating, and the fish shows increased "coughing" and erratic swimming.⁸
4. The two studies cited by the Department as support for the proposed allowance of a CPO Demand adjustment when determining water quality based effluent limitations for CPO are inappropriate and insufficient. CPO Demand is not only a function of CPO concentration and time, but also water temperature, pH, turbidity, organic content and ammonia concentrations, of the receiving water.⁹ All of these factors will impact the rate of CPO demand. The CPO Demand Factor equations generated by this study (and accepted for use by the Department) do not include any of these important variables.

In addition, the CPO Demand Study did not appear to include any biological data to support the theory that CPO demand will eliminate toxicity of CPO. There is a proven synergistic effect between CPO toxicity and temperature, i.e. with increasing temperatures, the concentration of CPO that causes significant mortality rates in marine fish goes down. So, although warm water temperatures may reduce the concentration of CPO in the water, the exposed marine organisms are more susceptible to the toxic effects of CPO. Without biological studies on the impacts of different CPO concentrations during different times of the year, it is impossible to determine whether the increased CPO Demand rates during summer months (as reported by the New Jersey Coastal Group Facilities) will be enough to eliminate the substantial metabolic impacts of high temperature and CPO exposure to aquatic organisms within the mixing zone.

⁴ Bender *et al.*, 1977

⁵ Permit Summary Table, Fact Sheet for NJ0025241, page 26

⁶ Capuzzo *et al.*, 1976, 1977; Capuzzo, 1977, 1979a

⁷ Buckley, 1976

⁸ Grothe and Eaton, 1975; Buckley, 1977; Travis and Heath, 1981

⁹ Heinemann *et al.*, 1983; Abdel-Gawad and Bewtra, 1988; Milne, 1991

In the response to comments section of the 2008 final NJPDES permit for Ocean County UA (NJ0029408), the Department agreed to further evaluate this relationship. Considering the significant toxicity of CPO to marine organisms, COA requests a timeline for the completion of the Department's evaluation of the interaction between temperature and CPO.

B. Ammonia:

This draft permit requires monitoring and reporting only for ammonia, without any WQBELs. Dilution factors are not appropriate given the toxicity of ammonia to marine organisms. We understand the Department's determination that "*discharge of ammonia in the permittee's effluent will likely not cause an excursion of the applicable SWQS*" was not based on ammonia effluent data from this facility because "*insufficient effluent ammonia data exists for this facility.*" Therefore, the Department must re-evaluate the need for a WQBEL following the first year of data collection. If excursions of the SWQS for ammonia occur during this time period, then a WQBEL must be established. Depending on the results of the re-evaluation, the Department should maintain the right to impose WQBELs for ammonia before the end of this 5-year permit cycle. What is the "circumstance specific basis" used by the Department¹⁰ to determine whether evaluation is necessary prior to the permit renewal?

C. Whole Effluent Toxicity (WET):

The semi-annual monitoring frequency requirements in this draft permit **is not sufficient** to adequately detect and assess variations in effluent toxicity between and within years. The Department should adopt quarterly frequency requirements. The low 52 % sample on the permit summary table was not found in the NJPDES DMR data available for this time period, which had results ranging from 67 % to 100 %.¹¹ The data submitted to the Department must be reviewed and either the permit summary table or the NJPDES DMR data must be corrected.

D. Dissolved Oxygen (DO):

The New Jersey coastal waters often experience dangerously low D.O. levels during the summer months. To address this impairment, point sources of low D.O. waters need to be identified and mitigated. A D.O. measurement of only once per month is not sufficient, instead daily or biweekly measurements during June –Sept. would be more appropriate for evaluating the discharge.

E. Nitrogen:

The Department must develop and establish monitoring and reporting for Total Nitrogen at Asbury Park and other facilities that discharge to coastal waters regardless of the lack of SWQ standard for nitrogen. Nitrogen is the primary limiting

¹⁰ NJDEP 2008. Final New Jersey Pollutant Discharge Elimination System (NJPDES) permit action for Ocean County UA. Permit No. NJ0029408. Sept. 29, 2008

¹¹ NJPDES DMR Data (1/31/2003-1/31/2008) http://datamine2.state.nj.us/DEP_OPRA/OpraMain/get_long_report? (last visited October 28, 2008).

nutrient in marine waters and the discharge of nitrogen from WWTF contributes to increases in algal biomass and reductions in dissolved oxygen concentrations due to the decay of associated organic matter. The fact that all of New Jersey's coastal waters are impaired for Dissolved Oxygen provides reasonable justification for, at minimum, a monitor and report requirement for nitrogen. To address the dissolved oxygen impairment of New Jersey waters and increase knowledge of nitrogen loadings to coastal waters, it is necessary for the Department to identify and minimize the contribution of nitrogen to coastal waters by point sources.

F. Toxic Metals, Organic Compounds and Cyanide:

1. COA has repeatedly urged the Department to increase the frequency of monitoring of pollutants to monthly intervals. The annual and semi-annually monitoring frequency requirements listed in this draft permit **are not sufficient** to adequately detect and assess variations in toxin levels between and within years.

2. The use of dilution factors has resulted in unacceptably high and toxic wasteload allocation values (WLA). The allowable copper and zinc concentrations are 50 times the acute SWQ and 100 times the chronic SWQ. Copper and zinc were found to be within these WLAs. However, without a dilution level, the LTA for copper exceeds the SWQ by at least 34.6 µg/L and the LTA for zinc is 297.9 µg/L (times higher) above the SWQ. These high values are detrimental to marine life in close proximity to this outfall pipe.

G. Polychlorinated biphenyls (PCBs)

COA strongly supports NJDEP's requirement to test for PCBs using the EPA Method 1668A given the long-standing impairment of NJ's coastal waters of PCB accumulation in fish tissue. However, the sampling frequency and time period needs clarification, which is "up to 6 samples" over a two-year period. The words "up to" should be deleted for consistency with Part IV D.2.. Part IV D.2. needs to be referred to in Section 6 N for critical details regarding testing requirements that are not specified in Section 6 N. Also, "PCB levels at or close to background levels" are not defined or specified. Therefore, it is not clear when and how exceedance of these levels will be determined.

Reclaimed Water for Beneficial Reuse (RWBR): COA is concerned that RWBR may be approved for this facility without adequate data on the effluent to be reused, without any limitations or conditions for several important contaminants, and without a public comment period. The permit allows the Department to approve several different public access and restricted access reuse options via only minor modification to the permit.

The RWBR Technical Manual's guidelines for preparation of Reuse Feasibility Studies for Wastewater Treatment Facilities require an environmental feasibility study, yet they do not include a requirement that the facility submit their last five (5) years of effluent monitoring data. Until an amendment is made to the RWBR Technical Manual, the Department must include the above requirement in the facility's permit, to allow for comparison with relevant limitations/conditions of the requested reuse. Simply reviewing five (5) years worth of priority

pollutant scans from the wastewater facility is not sufficient to characterize the potential contaminants in the effluent stream or identify additional treatment that may be necessary.

Clean Ocean Action urges the Department to either require this facility to first submit a Reuse Feasibility Study, or refrain from approving any additional reuse of wastewater until the newly proposed requirements are adopted. In the final NJPDES permit for Ocean County UA, the Department responded to this request that the RFS is needed only “to determine if the proposed [RWBR] project is economically sound”...and that “a RFS is not appropriate for this situation” as the facility already determined the feasibility without a RFS. This contradicts the Department’s own guidelines that also require environmental and technical feasibility studies as part of a RFS, which are also critical so that RBWR has a minimal negative impact on the environment. It is unreasonable and unjustifiable for the Department to issue guidelines and then not require their use. Our request for public comment on previous NJPSDES RBWR was also ignored. How many RWBR projects does the Department intend to allow? If the number is too high to allow for public comment on each individual project, then COA requests that the Department allow and respond appropriately to public comments on an annual basis on a summary report of reuse projects.

In conclusion,

COA finds that limits are not being implemented for important parameters such as ammonia and enterococci, CPO levels are exceedingly high and limits will not be posed for another three years, and mixing zones have been allowed without proper study of the effects on aquatic organisms. For these reasons, we are very concerned that this facility is releasing toxins in toxic amounts in the effluent. In addition, there is no monitoring and reporting requirement for total nitrogen. The draft permit should not be approved until additional limits and requirements are included.

We thank you in advance and look forward to your written reply.

Sincerely,



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Executive Director



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