

September 8, 1999

**MEMORANDUM OF AGREEMENT BETWEEN THE NEW JERSEY PINELANDS
COMMISSION AND THE OCEAN COUNTY UTILITIES AUTHORITY**

I. Purpose

The purpose of this Memorandum of Agreement (MOA) between the New Jersey Pinelands Commission (Commission) and the Ocean County Utilities Authority (OCUA) is to authorize the limited use of a specific sludge derived product, known as Oceangro, in the Pinelands Area.

II. Background

The OCUA operates three wastewater treatment facilities. The solids that are removed as part of the treatment process are referred to as sludge. The Authority constructed a fertilizer manufacturing plant to process the sludge into a pelletized fertilizer product. The resulting sludge derived product, known as Oceangro, is defined by the Pinelands Comprehensive Management Plan (CMP) as a waste derived material.

The CMP (N.J.A.C. 7:50-6.79) prohibits the application of a waste derived material to any parcel of land in the Pinelands Area with limited exceptions. One of the exceptions is the one time application to any parcel of land of not more than 100 cubic yards of sludge derived product provided certain conditions are met. Another exception allows the use of a sludge derived product for agricultural operations provided certain conditions are met.

The CMP (N.J.A.C. 7:50-6.80(c)) specifically provides that the Commission may enter into intergovernmental memorandum of agreement with other governmental agencies which authorize exemptions to certain limitations contained in N.J.A.C. 7:50-6.79. As applicable to this proposed MOA, these exemptions are authorized if the Commission determines that the sludge derived product shall only be used for land application in support of otherwise permitted land uses, reasonable safeguards are established to limit the type and total amount of material to be land applied or used, a monitoring program is implemented to determine the effects of the activities on the resources of the Pinelands and the duration of the MOA is limited to that necessary to complete the monitoring program, except if extended to permit subsequent rulemaking.

The New Jersey Department of Environmental Protection (NJDEP) sets forth the standards for the use and disposal of sludge derived products in N.J.A.C. 7:14A-20-1 et. seq. (Standards for the Use or Disposal of Residual). Processing operations that generate sludge derived products require a New Jersey Pollution Discharge Elimination System (NJPDES) permit issued by the NJDEP. The NJPDES permit requires sludge derived products to be routinely tested and specifies the conditions under which these products may be applied to lands in New Jersey.

This MOA will allow the use of an OCUA sludge derived product, known as Oceangro, on certain lands in the Pinelands Area. Those lands include specific parcels that will be subject of ground water quality monitoring programs and any other parcel that may receive up to a maximum of 100 cubic yards per calendar year of Oceangro.

III. Commission Agreements;

1. The Commission shall allow the use of Oceangro on lands in the Pinelands Area in accordance with the provisions of this MOA.
2. Prior to the 5 year expiration date of this MOA, the Commission will amend the CMP, modify the MOA or terminate the MOA, as appropriate, based on the results and conclusions of the ground water quality monitoring. Specifically, if the ground water quality monitoring programs indicate that Oceangro is meeting CMP water quality standards, the Commission staff will propose an amendment to the CMP to allow for the use of Oceangro in the Pinelands Area. If the ground water quality monitoring programs indicate that Oceangro is not meeting CMP water quality standards, the Commission staff will propose to modify or terminate this MOA.

IV. OCUA Agreements;

1. This MOA applies exclusively to the use of the sludge derived product known as Oceangro in the Pinelands Area. No other sludge derived product shall be applied in the Pinelands Area based upon the provisions of this MOA.
2. Any proposed use of Oceangro in the Pinelands Area not expressly authorized in this MOA shall only occur if it meets all standards of the CMP and completes any necessary application to the Pinelands Commission.
3. No use of Oceangro shall occur for the duration of this MOA based upon N.J.A.C. 7:50-6.79 (a) 1 of the CMP.
4. Oceangro shall not be applied in either the Pinelands Preservation Area District or Pinelands Special Agricultural Production Areas.
5. The OCUA will establish, at a minimum, one ground water quality monitoring program for Oceangro as set forth in Attachment 1 of this MOA at the site of a golf course located in the Pinelands Area that is currently subject of a Commission approved golf course ground water quality monitoring program. The OCUA will also establish a second ground water quality monitoring program for Oceangro as set forth in Attachment 1 of this MOA at a location on Ocean County park lands also located in the Pinelands Area that has not been impacted by the application of pesticides, fertilizers or other soil amendments.

- a. The ground water quality monitoring program for Oceangro located at the site of a golf course shall be approved by the Commission in accordance with the modified Commission application process specified in V. below prior to use of Oceangro on any parcel in accordance with the provisions of this MOA. The ground water quality monitoring programs shall be conducted in accordance with IV. 8. below.
 - b. The ground water monitoring program for the Ocean County park land shall be submitted to the Commission for approval in accordance with the modified Commission application process specified in V. below within 60 days of the date of the last signatory to this MOA. The program shall receive Commission approval and be instituted by the OCUA not later than September 1, 2000. The required ground water quality monitoring programs shall be conducted in accordance with IV. 8. below.
6. Upon establishment of the two required groundwater quality monitoring programs referenced in IV. 5. above, a maximum of 100 cubic yards of Oceangro per calendar year per principle structure or use may be applied to any parcel in the Pinelands Area provided;
 - a. the Oceangro is applied in support of an otherwise lawful use of a parcel.
 - b. the Oceangro is applied at accepted agronomic rates in accordance with IV. 13. below.
7. In addition to the golf course site subject of the ground water quality monitoring program specified in IV. 5. above, the use of greater than 100 cubic yards of Oceangro on any other golf course in the Pinelands Area that is already subject of an existing ground water quality monitoring program approved by the Commission will be permitted provided a ground water quality monitoring program in accordance with IV. 8. below and a modified Commission application are approved in accordance with V.3. below.
8. The water quality monitoring program for the use of Oceangro on the golf course site in Attachment 1 of this MOA shall commence on the first monitoring date for the existing golf course monitoring program that occurs at least 90 days after the date of the first use of Oceangro on the golf course. The water quality monitoring program for the use of Oceangro on the County park site in Attachment 1 shall commence on the first monitoring date that is encountered at least 90 days after the date of the first use of Oceangro on the park. The monitoring program shall continue for a period of 3 years as set forth in Attachment 1.

9. The OCUA will be responsible for all costs associated with the monitoring program set forth in Attachment 1.
10. The results of the ground water quality testing will be submitted to the Commission within 30 days of required testing.
11. A comprehensive report of the groundwater quality monitoring program, including conclusions and recommendations shall be submitted to the Commission with 120 days of the completion of the 3 year monitoring program.
12. Oceangro shall not be applied on or within 300 feet of wetlands.
13. No use of Oceangro shall exceed accepted agronomic rates as specified for the nitrogen requirement of the crop in "Rutgers Production Recommendations for New Jersey Field Crops".
14. All use of Oceangro shall be consistent with all requirements and conditions of the NJPDES Permit No. 0104299 for the OCUA fertilizer manufacturing facility, except if the CMP or this MOA specify more restrictive requirements or conditions.
15. Oceangro shall only be applied if it meets the USEPA, 40 CFR Part 503 regulation for Exceptional Quality pollutant, pathogen reduction and the Class A vector attraction reduction options all in accordance with the NJPDES Permit No. 0104299.
16. The RMS-01 form utilized by the OCUA to report nutrient and metal concentrations in the final Oceangro product shall be submitted to the Commission at the same times it is submitted to NJDEP for the duration of the monitoring program.

V. Mutual Agreements

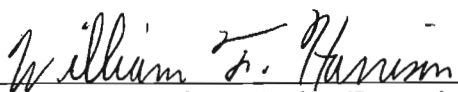
1. Accept as specified in V. 2. below and provided all requirements of this MOA are met, the use of 100 cubic yards or less per year of Oceangro on parcels in the Pinelands Area shall not require application to the Commission.
2. The proposed use of Oceangro on the two sites referenced in IV. 5. above and the use of more than 100 cubic yards of Oceangro in a calendar year on any other golf course that has an existing groundwater quality monitoring program approved by the Commission shall be subject of a modified Commission application process in accordance with V. 3. and 4. below.
3. Prior to the proposed use of Oceangro on the two sites specified in IV. 5 above and any other golf course site that has an existing ground water quality monitoring program approved by the Commission, the OCUA shall submit to the Commission all information specified in a. through f. below.

- a. A plan showing the general location of the parcel, the specific area (s) where Oceangro will be applied and any wetlands on or within 300 feet of the area proposed for the use of Oceangro;
 - b. A schedule indicating the duration, frequency and quantity of Oceangro to be applied to each area of the parcel;
 - c. For any golf course site, including those referenced in IV. 5. above, information verifying the existence of a groundwater quality monitoring program on the selected site.
 - d. For the proposed Ocean County park site referenced in IV. 5. above, the proposed location of groundwater monitoring wells and any necessary lysimeters.
 - e. A water quality monitoring program in accordance with (IV. 8.) above.
 - f. Public notice of the proposed use of Oceangro shall be provided for the two sites selected for monitoring in accordance with IV. 5. above and any other golf course site which is already subject of an existing ground water quality monitoring program approved by the Commission upon which greater than 100 cubic yards per calendar year of Oceangro is proposed for use. This public notice shall include legal notice published in the official newspaper of the respective municipalities and copies of green cards and one completed sample letter documenting that all owners of all real property within 200 feet in all directions of the parcel have been notified of the proposed application of Oceangro to the parcel. A copy of the certified list of property owners within 200 feet shall also be provided
4. Within 30 days of receipt of the information submitted pursuant to V.2. above, the Commission staff will provide written comments to the OCUA regarding the consistency or inconsistency of the proposal with the terms of this MOA.
 5. If the Commission staff notifies the OCUA that the proposed activity is consistent with the terms of this MOA, the OCUA may proceed with the activity.
 6. If the Commission staff notifies the OCUA that the proposed activity is not consistent with the terms of this MOA, the OCUA agrees to either modify the proposal so that it is consistent or file a formal application with the Commission. If a formal application is necessary, the OCUA understands that the activity may not occur until formal approval from the Commission has been obtained.

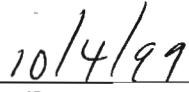
VI. Effective Date and Duration

1. This MOA shall take effect upon approval by the authorized representatives of both parties and subsequent to the Governor's review period of ten (10) days.
2. This MOA shall remain in effect for a period of 5 years from the date of the last signatory to the MOA.
3. This MOA may be terminated by either party upon sixty (60) days written notice.

VII. Signatures



William F. Harrison, Acting Executive Director
New Jersey Pinelands Commission



Date

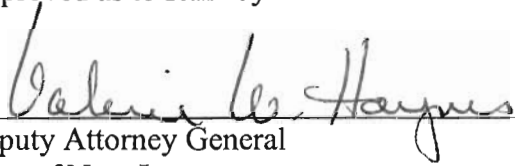


Richard M. Warren, Executive Director
Ocean County Utilities Authority

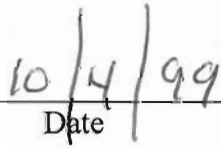


Date

Approved as to form by:



Deputy Attorney General
State of New Jersey



Date

MOA ATTACHMENT 1

WATER QUALITY MONITORING PROGRAM

The OCUA hereby agrees to undertake any ground water quality monitoring program required by the attached MOA in accordance with the following:

1. Ground water sampling will be conducted to ascertain background levels of the parameters listed in paragraph 14 of this Monitoring Program. As part of the continued use of Oceangro in the Pinelands Area, groundwater sampling shall be performed to monitor for these parameters.
2. For existing golf courses with a ground water quality monitoring program approved by the Commission, all parameters listed in paragraph 14 of this Monitoring Program will be tested at each monitoring well within ten days of the required testing dates specified in the existing golf course ground water quality monitoring program. For the Ocean County park land site, all parameters listed in paragraph 14 of this Monitoring Program will be tested at each monitoring well within ten days of April 1, June 1, September 1 and November 1.
3. Small wells (1 inch diameter) will be installed, as necessary, on each parcel and screened just below the water table and about 10 feet below the water table. Lysimeters, if necessary, will be located approximately 1 meter below the ground surface. This design will allow monitoring of constituents as they travel through the vadose zone to the water table, and transport in the water table. A qualified hydrogeologist will be responsible for well placement and installation.
4. A New Jersey certified laboratory will perform all required sampling and analysis of the specified constituents. The laboratory must demonstrate that it meets or exceeds all necessary qualifications as outlined in N.J.A.C. 7:18, Regulations Governing the Certification of Laboratories and Environmental Measurements" to perform the necessary sampling, preservation of samples and analyses. Sampling of the monitoring wells shall occur as specified by the NJDEP Field Sampling Procedures Manual (4th Edition, May, 1992). All methodology, sample containers, preservatives, and holding times shall be observed as specified by USEPA or NJDEP.
5. The amount of nitrogen from any source applied on the parcel shall be limited so that the concentration of nitrate-nitrogen in groundwater exiting the parcel, as measured at monitoring wells, does not exceed 2 ppm. If the background concentration of nitrate-nitrogen concentration exceeds 2 ppm, the amount of nitrogen applied on the parcel shall not cause the concentration to increase.

6. The groundwater monitoring wells and any necessary lysimeters shall be used for the purposes of sampling groundwater. The Pinelands Commission shall have access to the groundwater monitoring wells and lysimeters for necessary inspections and sampling at any time during normal business hours.
7. A copy of the results of the ground water quality testing will be submitted to the Commission by the OCUA within 30 days of the required testing date.
8. Within 30 days of use, the OCUA shall provide a listing to the Commission of Oceangro use on any site for which a ground water quality program is required by the MOA. The listing shall include dates, quantities and location of applications.
9. For those golf courses subject to this monitoring program, if any parameter (except pH, total nitrogen and nitrate nitrogen) listed in 14. A. below is detected in any of the groundwater samples in concentrations above background concentrations in any round, the OCUA will work in conjunction with the golf course in accordance with the conditions and terms of the existing Commission approved golf course ground water quality monitoring program to return the parameter to background concentrations.
10. For those golf courses subject to this monitoring program, if any parameter listed in 14. B. below is detected in any of the groundwater samples in concentrations above background concentrations in any round, the OCUA will modify or discontinue the use of the product on all sites subject of the attached MOA to return the parameter to background concentrations.
11. For the Ocean County park land site that is subject to this monitoring agreement, if any parameter listed in 14. A. or 14. B. below (except pH, total nitrogen and nitrate nitrogen) is detected in any of the groundwater samples in concentrations above background concentrations in any round, the OCUA will modify or discontinue the use of the product on all sites subject of the attached MOA to return the parameter to background concentrations.
12. If any parameter is detected in concentrations above background concentrations, the OCUA shall perform resampling within 10 days from receipt of the monitoring results by OCUA.
13. Monitoring shall be conducted for 3 years and conclude with submission of a comprehensive report prepared by the OCUA containing conclusions and recommendations on the use of Oceangro.

14. Analytical Requirements:

Parameter

- A. pH
- Nitrogen, Total (N)
- Nitrate, Nitrogen (NO₃)
- Ammonium, Nitrogen (NH₄)
- Phosphorus, Total (P)
- Potassium, Total (K)
- Fecal Coliform (Enterococcus) or
Salmonella, sp. bacteria

- B. Arsenic (As)
- Cadmium (Cd)
- Chromium (Cr)
- Copper (Cu)
- Lead (Pb)
- Mercury (Hg)
- Nickel (Ni)