



# SOUTH FLORIDA WATER MANAGEMENT DISTRICT

July 9, 2010

Michael W. Sole, Secretary  
Department of Environmental Protection  
3900 Commonwealth Blvd.  
Tallahassee, FL 32399

**Subject: Amended Memorandum of Understanding between South Florida Water Management District and the State of Florida Department of Environmental Protection Re: Cattle Dipping Vat Sites**

Dear Secretary:

Enclosed for your review and signature, please find an Amended Memorandum of Understanding between South Florida Water Management District and the State of Florida Department of Environmental Protection regarding Cattle Dipping Vat Sites. Once signed, please return a copy to my office.

Please feel free to contact me if you have any questions (561-682-6271).

Sincerely,

A handwritten signature in cursive script, appearing to read "Ruth P. Clements".

FOR

Ruth P. Clements, Director  
Land Acquisition Department

RPC:cb

Enc.

c: Robert Kukleski, SFWMD  
Kirk Burns, SFWMD  
Mary Jean Yon, DEP  
Doug Jones, DEP  
Brian Dougherty, DEP

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DEP SECRETARY

**AMENDED MEMORANDUM OF UNDERSTANDING**  
**BETWEEN THE**  
**SOUTH FLORIDA WATER MANAGEMENT DISTRICT**  
**AND THE**  
**STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

This **AMENDED MEMORANDUM OF UNDERSTANDING (MOU)** is entered into on this 20<sup>th</sup> day of July, 2010, between the South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, Florida 33406, a public corporation of the State of Florida ("DISTRICT"), and the State of Florida Department of Environmental Protection, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 ("DEP").

**WITNESSETH:**

WHEREAS, the DISTRICT is an independent taxing authority, created by the Florida Legislature and given those powers and responsibilities enumerated in Chapter 373, Florida Statutes;

WHEREAS, the DISTRICT is empowered to enter into contractual arrangements with public agencies, private corporations or other persons, pursuant to Section 373.083, Florida Statutes;

WHEREAS, the DISTRICT has in the past and will in the future acquire lands for the benefit of the citizens of Florida;

WHEREAS, some of the lands that the DISTRICT has or will acquire have abandoned cattle dipping vats ("CDVs") installed by former landowners as part of state and local tick eradication programs;

WHEREAS, the DISTRICT and the DEP entered into a Memorandum of Understanding dated February 7, 1994 ("1994 MOU"), by which the parties agreed to a procedure for the assessment and remediation of CDVs on DISTRICT lands acquired as part of the Kissimmee River Restoration Project;

WHEREAS, the DISTRICT and the DEP subsequently entered into an additional Memorandum of Understanding dated February 21, 2000 ("2000 MOU"), to address the assessment and remediation of nine new CDV sites acquired as part of the Kissimmee River Restoration Project and a provide for a protocol by which those nine sites would be managed after completion of active remediation on the sites;



WHEREAS, the DISTRICT and the DEP contemplated in the 2000 MOU that the DISTRICT might discover additional CDVs on DISTRICT lands and that such sites might be proposed for inclusion within the MOU; and

WHEREAS, since execution of the 2000 MOU, the Florida Legislature adopted Section 376.30701, Florida Statutes, and DEP adopted Rule Chapters 62-780 and 62-777, Florida Administrative Code (F.A.C.), both of which establish the general criteria for the assessment and remediation of contaminated sites; and

WHEREAS, the DISTRICT wishes to conduct remediation of CDV sites on properties acquired by the DISTRICT in order to reduce the human health and ecological risks to acceptable thresholds based on the end land use of these properties; and

WHEREAS, the DISTRICT is agreeing to effect remediation of CDV sites on properties acquired by the DISTRICT in order to reduce the human health and ecological risks to acceptable thresholds based on the end land use of these properties in accordance with Florida law; and

WHEREAS, in light of the foregoing, and the parties recognition that it is important to encourage the remediation of CDVs to address the potential public health and environmental problems they pose, the parties agree to revise the 2000 MOU to acknowledge that the provisions of Chapters 62-777 and 62-780, F.A.C, will be applied to future DISTRICT CDV sites.

NOW THEREFORE, the DISTRICT and DEP agree as follows:

Previously Identified sites with CDVs.

1. The assessment, remediation, and management requirements for eight of the nine sites identified in the 2000 MOU shall be governed by 1995 assessment protocols described in the Cattle Dip Vat Assessment Programs document prepared by Woodward-Clyde, the cleanup criteria and site management requirements set forth in the 2000 MOU, and reports adopted in that agreement, to the extent that the assessment, cleanup target levels and site management requirements were agreed to and implemented before April 17, 2005. Those eight sites are completed and not subject to the requirements of Chapter 62-780, F.A.C., so long as the sites are managed as required in the 2000 MOU. The ninth site, the Clemons (Micco Dairy) CDV site, is specifically excluded from this provision and shall be addressed in accordance with Paragraph 3 below.

2. Material changes in the use of any of the eight completed sites identified in the 2000 MOU that would result in their being managed or otherwise used in a manner inconsistent with the protocols described in Paragraph 3 of the 2000 MOU, shall require prior DEP approval. In addition, the DISTRICT shall notify DEP prior to taking any agency action to sell, lease, or otherwise transfer any interest in any of these eight CDV sites. Changes in land use may require additional remediation or monitoring. If additional remediation is required, the remediation shall be conducted by the DISTRICT



pursuant to Chapters 62-780 and 62-777, F.A.C., the risk-based closure options therein (including the use of engineering and institutional controls, as applicable), and provisions below that address new CDV sites.

New CDV sites.

3. CDVs discovered by the DISTRICT on its property shall be governed by the provisions of Chapters 62-777 and 62-780, F.A.C. except as provided in Paragraphs 1 and 2 above and as set forth below.

4. New CDV sites and assessment/remediation schedules.

a. Exhibit A provides a list of new CDV sites that are to be assessed and remediated in accordance with this MOU.

b. Additional CDV sites may be added to this MOU after submission by the DISTRICT of a letter providing an updated Exhibit A table and after the written concurrence of DEP.

c. The DISTRICT shall assess, remediate and monitor CDV sites in substantive accordance with the requirements of Chapter 62-780, F.A.C. (and the risk-based closure options), including the schedule of milestones for submittals. However, compliance with the schedule will be dependent upon project construction schedules, availability of funding, and available access to the property.

d. In order to expedite the remediation process, the DISTRICT may submit combined documents, as allowed under Rule 62-780.450, F.A.C., upon completion of the assessment and remediation of a CDV site. The combined document shall propose site closure without controls in accordance with this memorandum, site closure with controls in accordance with this memorandum, a Risk Assessment, Natural Attenuation with Monitoring, or additional Active Remediation for the site.

e. Upon completion of approved assessment, remediation and post-remediation monitoring, the DEP shall issue written notice that the remedial actions completed by the DISTRICT are consistent with the MOU and sufficient to protect human health and the environment. The DEP will not be required to prepare Site Rehabilitation Completion Orders or No Further Action letters, in specific accordance with Chapter 62-780, FAC.

5. Assessment and Remediation matters affected by the remoteness of CDV sites. Because the majority of the DISTRICT CDV sites are found in remote areas of the State and within large parcels with significant distances between the CDV and the parcel's boundaries, the following procedures relating to assessment, remediation, and institutional controls apply:



a. The presumptive remedy for remediation of contaminated groundwater at remote sites that will remain uplands shall be closure using engineering and institutional controls. Four consecutive quarters of post-remediation groundwater monitoring or site-specific groundwater modeling will satisfy the requirements in paragraph 4 as long as the following conditions are met:

i. The four consecutive quarters of groundwater monitoring demonstrate that the groundwater plume is delineated and stable or shrinking. For the purposes of defining "stable or shrinking", contaminant concentrations in the designated downgradient monitoring well shall be below the Chapter 62-777, FAC GCTLs for four consecutive quarters and SFWMD shall demonstrate by a simple two-dimensional analytical fate and transport model that groundwater will not migrate beyond the controlled area in the future, and;

ii. Source removal or alternative corrective actions acceptable by DEP are conducted to address soils with contaminant concentrations exceeding the Chapter 62-777, FAC soil cleanup target levels for leaching to groundwater (SCTL-LGW) and the SCTLs for leaching to surface water (SCTL-LSW) as applicable, or;

iii. Synthetic Precipitation Leaching Procedure (SPLP) testing is performed on representative soil samples and results do not exceed the Chapter 62-777, FAC Groundwater Cleanup Target Levels (GCTLs) and Surface Water Cleanup Target Levels, as applicable.

b. At its discretion, the DISTRICT may propose for DEP approval a limited number of short term pumping events in order to reduce groundwater contaminant levels. However, the performance of such pumping events shall not obligate the DISTRICT to continue pumping until the default GCTLs of Chapter 62-777, F.A.C. are met.

c. At its discretion, the DISTRICT may also propose for DEP approval other measures to minimize exposure risks at sites where a groundwater plume is less than 1,000 feet from private property, water supply wells or other sensitive receptors.

#### 6. Risk assessment.

a. The DISTRICT may propose consideration of the remoteness of any site and other factors described in 62-780 when determining the degree of risk posed by the site and the appropriate method for achieving compliance with the requirements of the rule.

b. An arsenic soil cleanup target level (SCTL) of 5.5 milligrams per kilogram (mg/kg) is appropriate for DISTRICT properties on which human contact is likely to occur less frequently than 250 days per year and on which arsenic is the sole contaminant of concern present. This SCTL for arsenic was calculated using the equation in Figure 4 of Chapter 62-777, F.A.C. and is considered to be protective with respect to direct exposure. Moreover, it is recognized that that soils containing arsenic at concentrations below 5.5 mg/kg will typically produce Synthetic Precipitation



Leaching Procedure (SPLP) results below the default GCTLs; thereby making this alternate SCTL protective with respect to potential leaching to groundwater, unless groundwater impacts are specifically identified.

c. The DISTRICT may elect to perform a risk assessment or other testing (e.g., SPLP) as allowed under Chapter 62-780, F.A.C., in the event that higher SCTLs may be justified. However, it is understood that a risk assessment or use of more stringent SCTLs may be required for sites where frequent human contact is likely or which contain other chemicals of concern, in addition to arsenic.

d. The DISTRICT may elect to perform a one-time risk assessment to develop alternate default cleanup target levels for other contaminants that are also commonly detected on CDV sites (e.g., chlordane, DDT, toxaphene). In this case, the DISTRICT would develop two or three exposure scenarios and would calculate alternate cleanup target levels for each scenario. These alternate cleanup target levels would be subsequently utilized for other CDVs that met the criteria for the exposure scenario and where these chemicals were encountered.

e. The DEP shall review risk assessment proposals in accordance with the risk-based criteria of Chapter 62-780, F.A.C., and shall either provide a concurrence letter or provide the reasons why the report's conclusions and recommendations cannot be approved.

7. If a proposal for site closure with controls in accordance with this memorandum is approved for DISTRICT owned parcels, a DISTRICT "Land Management Plan" shall be prepared that identifies the site, the concentrations and extent of any remaining contaminants at the site, and any restrictions on access or use necessary to achieve the appropriate level of protection. Provisions that shall be included in the Land Management Plan are provided in Exhibit B. The Land Management Plan will identify the Controlled Area for each CDV location on a map with GPS coordinates of the boundary corners shown. The Land Management Plan shall be a sufficient "institutional control" for purposes of Chapter 62-780, F.A.C. The Land Management Plan shall be provided to all contractors who will thereafter perform work at the CDV site within the Controlled Area that may involve disturbance of contaminated soil or contact with impacted groundwater. The DISTRICT and all contractors who perform work within the controlled area shall adhere to the provisions of the Land Management Plan. A copy of the Land Management Plan shall be provided to DEP prior to DEP's issuance of a concurrence letter. The Land Management Plan will no longer be a sufficient institutional control, if the DISTRICT transfers its interest in a CDV site. Before the DISTRICT transfers its interest in a CDV site with a Land Management Plan as an institutional control, the DISTRICT will properly record a restrictive covenant for the CDV site in the local county's land records in accordance with Chapter 62-780, F.A.C. and the template provided in the Institutional Control Registry (ICR) Guidance document, available on the internet at <http://www.dep.state.fl.us/waste/categories/brownfields/pages/ICR.htm>



8. The DISTRICT shall notify DEP of the DISTRICT's intent to transfer any interest in a DISTRICT CDV site or make any material change in its use of a CDV site that would result in it being managed or otherwise used in any manner inconsistent with the criteria upon which the site closure with controls in accordance with this memorandum was based, at least 90 days prior to such transfer and prior to making such changes or otherwise agreeing that those changes be made. Future changes in land ownership or the use, management, or stewardship of a CDV site may require additional assessment and/or remediation to be completed or additional institutional and engineering controls implemented, as applicable. If additional remediation is required, the remediation shall be conducted pursuant to Chapters 62-780 and 62-777, F.A.C., and the risk-based closure options and timetables therein, including the use of engineering and institutional controls as applicable.

9. Nothing herein constitutes an admission or acknowledgement by either party that the DISTRICT, as owner or operator of any of the CDV sites, is in any way liable to the State or to any other person or entity for any costs, damages, or penalties associated with the discharge, evaluation, contamination, assessment, or remediation of substances that were used in the CDVs at the sites.

10. This MOU states the entire understanding between the parties and may not be amended unless in writing and signed by all of the parties.

11. All notices and other communications required or permitted under this MOU shall be in writing and shall be sent by either 1) hand delivery, 2) United States mail (airmail if international by registered or certified mail (postage prepaid), return receipt requested, 3) any form of overnight mail delivery, or 4) fax to:

TO DISTRICT:

Director, Land Acquisition  
P.O. Box 24680  
West Palm Beach, Florida 33416  
Overnight Mail address:  
3301 Gun Club Road  
West Palm Beach, Florida 33406  
Phone (561) 682-6271  
Fax (561) 682-5263

TO DEP: Southwest District:  
Waste Program Administrator  
Florida Department of Environmental Protection  
Southwest District  
13051 N. Telecom Parkway  
Temple Terrace, FL 33637  
Phone: (813) 632-7600  
Fax: (813) 632-7665

TO DEP: Southeast District:  
Waste Program Administrator  
Florida Department of Environmental Protection  
Southeast District  
400 North Congress Ave., Suite 200  
West Palm Beach, FL 33401-2913  
Phone: (561) 681-6672  
Fax: (561) 681-6770

or to such other address as any party may designate by notice complying with the terms of this subparagraph. Each such notice shall be deemed delivered on 1) the date delivered if by personal delivery, or 2) on the date upon which the return receipt is signed or delivery is refused or the notice is designated by the postal authorities as not deliverable, as the case may be, if mailed, or 3) the day of receipt of any form of overnight mail service, or 4) the date of confirmed receipt of the fax, unless received after 5 p.m., whereby the delivery date will be deemed the next business day.

12. The parties or their duly authorized representatives hereby execute this MOU on the date first written above.

SOUTH FLORIDA WATER MANAGEMENT  
DISTRICT, BY ITS GOVERNING BOARD

By: *Carel Anable*  
Executive Director

FLORIDA DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

By: *Nimi A. Drew for*  
Secretary



**EXHIBIT A  
PROPOSED NEW CATTLE DIPPING VATS TO BE INCLUDED UNDER  
MEMORANDUM OF UNDERSTANDING**

<b>Cattle Dipping Vat Name</b>	<b>Location (County, Latitude, Longitude)</b>
<b>Clemons (Micco Dairy)</b>	Okeechobee 27°26'21"N 80° 08'13"W
<b>KICCO (Long Hammock)</b>	Polk 27° 45' 49" N 81° 11' 9"W
<b>Nubbin Slough</b>	Okeechobee 27° 12' 3" N 80° 43' 58" W
<b>Cypress Creek Natural Area (Sunrise Boys)</b>	Palm Beach 20° 56' 49" N 80° 11' 48" W
<b>Open Range Ranchettes</b>	St. Lucie 27° 21' 19" N 80° 35' 28 W
<b>Lakeside Ranch</b>	Martin 27° 7' 38" N 80° 39' 21" W
<b>Turnpike Dairy</b>	Martin 27° 9' 32" N 80° 33' 8" W
<b>Mack Dairy</b>	Martin 26° 57' 51" N 80° 14' 56" W
<b>Crew (Isabel Collier Read)</b>	Collier 26° 25' 18" N 81° 37' 11" W

**EXHIBIT B**  
**SUMMARY OF PROVISIONS TO BE INCLUDED IN LAND MANAGEMENT PLANS**

1. Following DEP approved closure, the DISTRICT agrees to maintain land use at the property consistent with the current exposure scenario, particularly with regard to the nature, frequency, and duration of human contact with soil at the site.
2. Unless otherwise stated, the current exposure scenario is assumed to involve infrequent contact. Land uses consistent with this scenario include state parks, hiking trails, wildlife management areas, water quality improvement projects, and agricultural sites where farming practices would result in only infrequent contact (e.g., two weeks total per year or less).
3. No buildings or structures will be constructed, maintained, or permitted within a quarter mile radius of the CDV, which would likely increase the frequency of the contact at the CDV site.
4. No installation of wells for potable water or irrigation purposes will be allowed within 1,000 feet where groundwater has been demonstrated to be impacted, unless further studies are performed in order to demonstrate that pumping from any such well would not cause migration of the plume.
5. For any change in land use and/or resultant exposure scenario from the current condition, the DISTRICT will evaluate soil contaminant concentrations in terms of the new exposure scenario to determine if additional corrective actions may be required. The DISTRICT shall notify the DEP of any land use or exposure scenario change at least 90 days prior to such change. The DEP will review and approve any proposal by the DISTRICT to conduct additional corrective actions as the result of any land use or exposure scenario change.
6. Soils within the CDV area shall not be disturbed without permission from the DISTRICT Land Acquisition Section. A Soil Management Plan shall be developed prior to any activities that will result in disturbance to the CDV site soils, which describes the proposed handling and disposal procedures to be utilized.
7. No dewatering shall be conducted within the CDV area without permission from the DISTRICT Land Acquisition Section and after receipt of all appropriate DEP permits. In applying for any DEP permits, the DISTRICT shall specifically notify the DEP of the proximity of the CDV to the dewatering location.
8. The Land Management Plan will identify the Controlled Area on a map with GPS coordinates with a minimum of 1 meter accuracy of the boundary corners shown.