

## 添付資料 15

成果 4:「ANDA の下水道整備計画策定能力が開  
発される」の活動記録



## 目 次

第1年次.....	1
第2年次.....	13



第1年次

## Record of Meeting/Discussion

<b>Date:</b>	2 de marzo de 2009	<b>Time:</b>	from 9:30	To 11:00
<b>Venue:</b>	ANDA Head Office			
<b>Meeting/Discussion among</b>				
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)	
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)	
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team	
<input type="checkbox"/>	Others			
<b>Attendants El Salvador side</b>				
	Name		Position	Department/Organization
1-	Jorge Rivas		Director Técnico	ANDA
2-	Antonio Viera		Gerente Infraestructura	ANDA
3-	Flavio Meza		Encargado Saneamiento- R. M	ANDA
<b>Attendants JICA Exparts (Name)</b>				
	Mr. Tetsuo WADA			
	Srta. Mariana (interprete)			
<b>Main Subject:</b>				
1. Inicio de actividades del Equipo para la elaboracion del proyecto de Planeamiento de Alcantarillado				
1. Start of activities of the Team for the elaboration of the Sewerage Planning Project.				
<b>Topic</b>	<b>Contents of Discussion</b>			<b>Conclusion</b>
	<ul style="list-style-type: none"> <li>- Presentacion de los miembros del equipo :                      Director Técnico : Ing. Jorge Antonio Rivas                      Gerente de Infraestructura : Ing. José Antonio Viera                      Ingeniero de Alcantarillado de la Región Metropolitana : Ing. Flavio Meza</li> <li>- Explicacion de parte del experto sobre el proyecto y sus objetivos</li> <li>- Se entregó disco conteniendo los archivos del esquema de la red general de aguas negras de ANDA y las zonas de cobertura en el AMSS a experto</li> <li>- Se discutió el contenido que tendrá el plan</li> <li>- De parte del equipo de ANDA, se expuso que se considera demasiado corto el tiempo para poder realizar el plan</li> <li>- De parte del experto, se informó que la duracion del proyecto depende de JICA y dependerá de los resultados que se planteen dentro del desarrollo de este proyecto.</li> <li>- Se programa una nueva reunion para el dia martes 3, para dar continuidad a la elaboracion del plan</li> </ul>			
1	<ul style="list-style-type: none"> <li>- Presentation of members of the team :                      Technical Director : Ing. Jorge Antonio Rivas                      Infrastructure Manager : Ing. José Antonio Viera                      Sewerage Engineer of the Metropolitan Area : Ing. Flavio Meza</li> <li>-</li> <li>- Explanation of the project and purposes from the expert.</li> <li>- Submission of CD with files of the general scheme of sewage networks of ANDA and the areas of coverage in the Metropolitan area of San Salvador, to the expert.</li> <li>- Discussion of the contents of the plan.</li> <li>- ANDA expressed that the time to make this plan is considered too short.</li> <li>- The expert informed that the duration of the project depends on JICA, and that it shall depend on the results obtained through the development of this project.</li> <li>- Next meeting will be held on Tuesday 3rd, to continue with the discussion on the elaboration of the plan.</li> </ul>			

Actions to be taken	by Whom	until When
- Nueva reunion el dia martes 3 de 2009 a la 10:30 - Next meeting on Tuesday 3rd of March 2009 at 10:30	- ANDA	- February 16

Date: 3.Marzo de.2009 by : Mr. YAMAMOTO, JICA Expert

## Record of Meeting/Discussion

<b>Date:</b>	3 de marzo de 2009	<b>Time:</b>	from 10:30 to 12:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	Name	Position	Department/Organization
1-	Jorge Rivas	Director Tecnico	ANDA
2-	Antonio Viera	Gerente Infraestructura	ANDA
3-	Flavio Meza	Encargado Saneamiento- R. M	ANDA
<b>Attendants JICA Exparts (Name)</b>			
	Mr. Tetsuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Seguimiento a la elaboracion del plan de alcantarillado			
1. Follow up of the elaboration of the sewerage problem.			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<ul style="list-style-type: none"> <li>- Lluvia de ideas sobre los problemas de alcantarillado.</li> <li>- Se agruparon los problemas en cuatro áreas : Operacion y Mantenimiento, Financiamiento, Planeamiento y Leyes.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>- Brainstorming ideas about problems on sewerage.</li> <li>- Grouping of problems in four areas: O&amp;M, Finance, Planning and Legislation.</li> </ul>		
<b>Actions to be taken</b>		<b>by Whom</b>	<b>until When</b>
- Nueva reunion el dia miercoles 4 de 2009 a la 10:30		- ANDA	
- Next meeting on Wednesday 4th of March 2009 at 10:30			

Date: 3.Marzo de.2009 by : Mr. Flavio Meza, ANDA

## Record of Meeting/Discussion

<b>Date:</b>	4 de marzo de 2009	<b>Time:</b>	from 10:30	to 13:00
<b>Venue:</b>	ANDA Head Office			
<b>Meeting/Discussion among</b>				
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)	
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)	
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team	
<input type="checkbox"/>	Others			
<b>Attendants El Salvador side</b>				
	Name		Position	Department/Organization
1-	Jorge Rivas		Director Tecnico	ANDA
2-	Antonio Viera		Gerente Infraestructura	ANDA
3-	Flavio Meza		Encargado Saneamiento- R. M	ANDA
<b>Attendants JICA Expats (Name)</b>				
	Mr. Tetsuo WADA			
	Srta. Mariana (interprete)			
<b>Main Subject:</b>				
1. Seguimiento a la elaboracion del plan de alcantarillado				
1. Follow up of the elaboration of the sewerage problem.				
<b>Topic</b>	<b>Contents of Discussion</b>			<b>Conclusion</b>
1	<ul style="list-style-type: none"> <li>- Se definieron necesidades para poder dar solucion o alcanzar la meta a cada problema planteado.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>- The needs to achieve the goal for each problem were defined.</li> </ul>			
<b>Actions to be taken</b>			<b>by Whom</b>	<b>until When</b>
- Nueva reunion el dia jueves 5 de 2009 a la 10:30			- ANDA	
- Next meeting on Thursday 5th of March 2009 at 10:30				

Date: 3.Marzo de 2009 by : Mr. Flavio Meza, ANDA



## Record of Meeting/Discussion

Date:	5 de marzo de 2009	Time:	from 10:30 to 13:00
Venue:	ANDA Head Office		
Meeting/Discussion among			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
Attendants El Salvador side			
	Name	Position	Department/Organization
1-	Jorge Rivas	Director Tecnico	ANDA
2-	Antonio Viera	Gerente Infraestructura	ANDA
3-	Flavio Meza	Encargado Saneamiento- R. M	ANDA
Attendants JICA Exparts (Name)			
	Mr. Tetsuo WADA		
	Srta. Mariana (interprete)		
Main Subject:			
1. Seguimiento a la elaboracion del plan de alcantarillado			
1. Follow up to the elaboration of the sewerage problem.			
Topic	Contents of Discussion		Conclusion
1	<ul style="list-style-type: none"> <li>- Se propusieron soluciones para los problemas. Las soluciones se categorizaron y la importancia de las soluciones se ordenaron de la manera siguiente : legal, planificacion, en primer lugar y en paralelo, con la concientizacion social, recursos financieros y humanos en segundo lugar ambas en paralelo y operacion y mantenimiento en tercer lugar.</li> <li>- Se recomendó contar con nuevas ideas para tarifas a presentar para poder convencer a la parte politica en cuanto a la aprobacion de nuevas tarifas</li> <li>- El área legal se divide en tres areas : aprobacion de tarifas, plan de desarrollo territorial y ley del sector agua y saneamiento</li> </ul> <hr/> <ul style="list-style-type: none"> <li>- Solutions for the problems were proposed. The solutions were categorized and the importance of the solutions were ordered as follows : Firstly, Legalization and Planning in parallel with public awareness; secondly, financial and human resources in parallel, and finally, O&amp;M.</li> <li>- As for the approval of new tariffs, it was recommended that new ideas for tariffs should be presented, to be able to convince the political power.</li> <li>- The legal area is divided in three areas: Approval of tariffs, land development plan and Laws for water and sanitation.</li> </ul>		
Actions to be taken		by Whom	until When
- Nueva reunion el dia vienes 6 de 2009 a la 10:30		- ANDA	
- Next meeting on Friday 6th of March 2009 at 10:30.			

Date: 3.Marzo de 2009 by : Mr. Flavio Meza, ANDA

## Record of Meeting/Discussion

Date:	March 6 2009	Time:	from 12:30 to 13:00
Venue:	ANDA Head Office		
Meeting/Discussion among			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
Attendants El Salvador side			
Name	Position	Department/Organization	
I-Flavio Meza	Encargado Saneamiento- R. M	ANDA	
Attendants JICA Exparts (Name)			
Mr. Tetsuo WADA			
Srta. Mariana (interprete)			
Main Subject:			
1. ANDA の下水道組織及び下水道事業の現状			
Topic	Contents of Discussion	Conclusion	
1	<p>メトロポリタン衛生部門 Flavio Meza 氏（下水道チーム）との面談</p> <p>ANDA は 1963 年の法律（ANDA Law）により設立され、下水道に関しては下水道施設の維持管理運営を担っている。この法律により既存の下水道システムの所有権は ANDA に移管されることになったが、移管に反対したスチット、ネバパの 2 つの地方自治体は管きよは ANDA が管理しているが、下水処理場は地方自治体が運営管理している。また、このほかに村落レベルの衛生システムがあるがその数は把握できていない。</p> <p>ANDA の上位機関は Ministry of Public Works (MOP) であるが、ANDA はより独立色の強い機関である。予算も一応 MOP が目を通している。</p> <p>ANDA の役割は現在のところ下水道施設の維持管理がメインであり、下水道は分流式のため、ANDA は汚水の管理を行い、雨水排水は MOP の管轄である。</p> <p>ANDA の下水道部門について、各支部に維持管理部 (Operation Department 又は Sub-management of operations) があり、ここの衛生 (Sanitation) 部門が下水の維持管理を行っている。責任者は各支部の Manager である。衛生部門の仕事は、維持管理が主であり、予算がないこともあるが計画はしていない。人数はメトロポリタンで衛生課に 30 名おり、技術者は 3 名である。また、ANDA 全体の下水関連の技術者は 15 名程度である。</p> <p>現在 ANDA が直接行っている維持管理場所は 60 ヶ所、委託しているものが 22 ヶ所、全部で 82 ヶ所を行っている。維持管理方法は O&amp;M の指針はなく、O&amp;M も問題が出たら行うという状態で維持管理計画というものはない。また、下水道の維持管理上のデータ（不具合箇所等）は各衛生 (Sanitation) 部門にあり統括して ANDA 全体で管理を行ってはいない。維持管理上で管きよの敷設換えが必要となるが、これは計画を立てて行われているわけではない。しかし、管きよの敷設換えの一連</p>		

<p>の手順は、統一されており、その手順は、1) 問題の発見・評価、2) 他の部門とともに他の問題と比べて重要度を評価、3) TORを作成、4) 調達・入札、5) 建設の管理・施工審査となっている。</p> <p>ANDA には計画・開発部(Planning and Development Directorate)に sub-management for planning があるが統計集のデータ収集及び出版が主な仕事で計画は行っていない。また、ANDA の Infrastructure Management は上下水道の工事の入札、工事の監督、完成後の検査等を行っており、事業の実施部署として機能している。</p> <p>下水道計画については、その上位計画は urban development plan であるがこの中に下水道は含まれていない。また、計画指針はなく技術規定のみである。</p> <p>過去の下水道計画については、1995 年と 2000 年に下水道に関して初期調査を行ったが、その後は行われていない。その中では、人口の予測・流入水量の予測と概算費用の算定を行った。</p> <p>下水道の新規建設については、ANDA は新規の下水道建設は行っておらず、宅地開発を行った民間業者が計画・建設を行っている。民間業者により建設された施設は、その後 ANDA の技術基準を満たしていれば、ANDA に所有権が移り維持管理を行うが、基準を満たしていなければ ANDA は受け取りを拒否し、維持管理は行わない。通常、移管を前提とした場合、ANDA は計画段階から民間業者にアドバイスをを行う。このため、新規建設に係る ANDA の仕事は、宅地業者からの移管のための性能審査や検査を行うことである。また、下水道がなく開発業者もなく独自に人が家を建て住み始め、下水が問題となる場合については、Ministry of Public Works 傘下の ANDA とは異なる機関で (National Funds for Social House Hold Institution) 予算をつけ、下水道を建設することもある。この場合は ANDA の技術規定に基づいて建設しているため、建設後 ANDA に移管となる。</p> <p>ANDA の下水処理場建設に関しては、事例がないが既存の下水道システムで ANDA が現在未処理のまま放流しているところには、ANDA が下水処理場を計画・建設できるが、予算面から行われたことはない。</p> <p>ANDA 以外の下水処理施設としては、村落レベルで衛生システムが点在している。これらは、ANDA の技術規定を満たしておらず、維持管理も行われず放置されていることが問題となっている。</p> <p>以上</p>		
Actions to be taken	by Whom	until When
	- ANDA	

Date: March 9 by : Mr. Tetsuo WADA, JICA Project Team



## Record of Meeting/Discussion

<b>Date:</b>	6 de marzo de 2009	<b>Time:</b>	from 11:00	to 12:30
<b>Venue:</b>	ANDA Head Office			
<b>Meeting/Discussion among</b>				
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)	
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)	
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team	
<input type="checkbox"/>	Others			
<b>Attendants El Salvador side</b>				
	Name		Position	Department/Organization
1-	Flavio Meza		Encargado Saneamiento- R. M	ANDA
2-	Manuel Rivera		Direccion Tecnica	ANDA
<b>Attendants JICA Exparts (Name)</b>				
	Mr. Tetsuo WADA			
	Srta. Mariana (interprete)			
<b>Main Subject:</b>				
1. Seguimiento a la elaboracion del plan de alcantarillado				
1. Follow up of the elaboration of the sewerage problem.				
<b>Topic</b>	<b>Contents of Discussion</b>			<b>Conclusion</b>
1.	<ul style="list-style-type: none"> <li>- Sesion de preguntas y respuesta relacionadas con :                             <ul style="list-style-type: none"> <li>➤ procedimientos para la ejecucion de proyectos (factibilidad)</li> <li>➤ Recepcion de la red de alcantarillado</li> <li>➤ legislacion sobre alcantarillado, normas tecnicas de ANDA y ley del medio ambiente</li> <li>➤ ampliaciones de la red de alcantarillado por parte de urbanizadores</li> <li>➤ Responsabilidad de ANDA para la construccion de plantas de tratamiento.</li> </ul> </li> </ul> <hr/> Session of questions and answers related to : <ul style="list-style-type: none"> <li>- Procedures for the execution of projects (feasibility)</li> <li>- Reception of the sewerage network</li> <li>- Legislation about sewerage, ANDA technical norms and environmental norms</li> <li>- Expansion of the sewerage network by constructors.</li> <li>- Responsibility of ANDA for the construction of treatment plants.</li> </ul>			
<b>Actions to be taken</b>			<b>by Whom</b>	<b>until When</b>
- Nueva reunion el dia lunes 9 de 2009 a la 10:30			- ANDA	
- New meeting on Monday 9th of March 2009 at 10:30.				

Date: 3.Marzo de 2009 by : Mr. Flavio Meza, ANDA

## Record of Meeting/Discussion

<b>Date:</b>	March 9 2009	<b>Time:</b>	from 11:30 to 13:00
<b>Venue:</b>	ANDA Presidential Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input type="checkbox"/>	Sewerage Planning Team
<input checked="" type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	Name	Position	Department/Organization
1	Mr Joao Alfaro		Legal Management Section Legal Unit, ANDA
<b>Attendants JICA Exparts (Name)</b>			
	Mr. Tetsuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. ANDA の法的側面の現状			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<p>ANDA Legal Management Section Legal Unit の Joao Alfaro 氏との面談</p> <p>ANDA は 1961 年に水道の供給事業のために設立され、環境法の改正に伴い下水道ののちに加わった。ANDA は規制や監視を行う組織ではなく、上下水道のサービスを提供する組織である。</p> <p>下水道に関する規制に関しては、環境省が ANDA の下水道、地方自治体、及び集落の下水道の法的な規制を定めている。このため、環境省は ANDA の下水道施設の規制や監督を行う権限を持ち、ANDA の下水道は環境省の規制に従い建設、維持管理される。このため、環境省が正式に許可した下水道のデータは環境省にあるが、環境省は 90 年代に設立された組織のため、それ以前に建設された下水道については環境省には存在しない。</p> <p>ANDA と他省庁とのかかわりは、Board of Directors に Ministry of Public works と Ministry of Public Health から役員を受け入れている。このため、予算等に関してはこれらの省庁の承認が必要となる。このため、ANDA の情報はこれら省庁に共有されており、下水道に関しては Ministry of Public Works の Infrastructure section が上位機関であり、水道は Ministry of Public Health となっている。また、Ministry of Public Works は雨水排水も担当している。</p> <p>上位機関の監督内容については、公共水域の水質保全は Ministry of Environment が、人間の飲料水に関しては Ministry of Public Health が行っている。</p> <p>ANDA 法に照らせば、財務的に余裕があれば ANDA は下水道整備を行うことができるが、過去においては整備を行ったこともあったが、現</p>		

<p>在では行っていない。</p> <p>以下環境関連法についての説明。</p> <p>環境法は、環境省と <b>Ministry of Public Health</b> を汚染防止とそのため の監督を行う機関としている。そして、両省に水環境を守る必要な規 制を行う権限を与えている。</p> <p><b>Special Regulation of Technical Norms of Environment</b>（環境の技術 規定）では、公共水域を守る水質規定とその制度を規定している。</p> <p><b>Special Regulation of Wastewater</b>（排水の技術規定）では、下水が公 共水域を悪化させないことを促進し、環境省にその実行を行う責任機 関としている。</p> <p><b>Law of Integrated Water Resource Management</b>（包括的な水資源管 理法）は環境省に水に関する政策の調査・作成の調整を行うことを規 定している。</p> <p><b>Regulation of water quality, wastewater control and Protection Zone</b> （水質、排水管理と保護区域の規制）は下水処理の水質を定めている。</p> <p>以上</p>		
Actions to be taken	by Whom	until When

Date: March 9 by : Mr. Tetsuo WADA, JICA Project Team



## Record of Meeting/Discussion

<b>Date:</b>	9 de marzo de 2009	<b>Time:</b>	from 14:30 to 16:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	<b>Name</b>	<b>Position</b>	<b>Department/Organization</b>
1-	Jorge Rivas	Director Tecnico	ANDA
2-	Antonio Viera	Gerente Infraestructura	ANDA
3-	Flavio Meza	Encargado Saneamiento- R. M	ANDA
<b>Attendants JICA Exparts (Name)</b>			
	Mr. Tetsuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Cronograma de entrenamiento			
1. Training schedule			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<p>En base al análisis de problemas de alcantarillado, se decidieron los siguientes contenidos para el entrenamiento.</p> <p>1. Legislación Conocer y estudiar la condición del alcantarillado del punto de vista del marco legal.</p> <p>2. Planeación Conocer el bosquejo para planificación de alcantarillado el cual incluya los contenidos de estimación de población, estimación de caudal, diseño de tuberías de alcantarillado, diseño de planta de tratamiento de aguas residuales, estimación de costos, cronograma de construcción y plan financiero.</p> <p>3. O&amp;M Analizar la situación de O&amp;M y discutir los puntos para su mejoramiento.</p> <p>4. Recursos (Financieros y humanos) Analizar la situación actual, y discutir la organización y el programa de entrenamiento, conciencia pública, y sistema de tarifas.</p> <p>5. Preparación del manual y taller de trabajo Resumir los contenidos de cada entrenamiento y depurar el contenido del manual, y preparar presentaciones de power point para el taller de trabajo.</p> <hr/> <p>Based on the problem analysis of sewerage, the following training contents were decided.</p> <p>1. Legislation Learn and Study the condition of sewerage in view point of legal framework.</p> <p>2. Planning Learn the outline of sewerage planning in which the following contents including population estimation, sewage flow estimation, design of sewerage pipe, design of wastewater treatment plant, cost estimation, construction schedule, and financial plan</p> <p>3. O&amp;M</p>		

	<p>Analyze O&amp;M situation and discuss improvement points on O&amp;M</p> <p>4. Resource (Financial and Human) Analyze the present situation, and discuss the organization and the training program, Public awareness, and tariff system</p> <p>5. Preparation for manual and workshop Summarize the each training content and brush up the content of manual, and prepare power points for workshop</p>	
Actions to be taken	by Whom	until When

Date: 9.Marzo de.2009 by : Mr. Tetsuo WADA, JICA Project Team



第2年次

## Record of Meeting/Discussion

Prepared by Mamiya (drafted by Ms Mariana)

Date: June 30, 2009

<b>Date:</b>	dd 29 mm 6 2009	<b>Time:</b>	from 15:00 to 15:40
<b>Venue:</b>	ANDA Multipurpose Hall		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input type="checkbox"/>	Sewerage Planning Team
<input checked="" type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	Name	Position	Department/Organization
1	Mr. Antonio Viera	Infrastructure Manager	ANDA
2			
3			
4			
5			
6			
<b>Attendants JICA Experts (Name)</b>			
	Mamiya	Wada	Ms Mariana (Interpreter)
<b>Main Subject:</b>			
Discussing the program of activities of the Sewerage Planning Team (SPT) and Non Revenue Water (NRW) Reduction Management Team as well as the confirmation of members of each team			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<p><b>Sewerage Planning Team (SPT)</b></p> <p>Regarding additional members for the SPT, according to a meeting held with Mr. Gómez (President of ANDA) the past June 23rd, Ms. Daniela Rodriguez from the financial section of ANDA, and Mr. William Zuniga from the legal section were suggested to form part of the SPT.</p> <p>Mr. Viera stated that he has no problem in calling these persons to arrange their participation in the team.</p> <p>Furthermore, Mr. Viera pointed out that Mr. Meza has recommended two (2) more technicians to join the team (Mr. Viera does not their names for the moment).</p> <p>Moreover, Ms. Marta Maria Nuila, and Ms. Gladys Rodriguez who are listed as members of the NRW Reduction Management Team have been shifted to the SPT due to the fact that they are specialists on wastewater treatment.</p> <p>Therefore, the eight (8) members of the SPT are summarized as follows:</p> <ul style="list-style-type: none"> <li>- Mr. Antonio Viera</li> <li>- Mr. Flavio Meza</li> <li>- Ms. Marta Maria Nuila</li> <li>- Ms. Gladys Rodriguez</li> <li>- Ms. Daniela Rodriguez</li> <li>- Mr. William Zuniga</li> <li>- One (1) technician appointed by Mr. Meza</li> </ul>		

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*Project for Organizational Strengthening and Operational Improvement for ANDA*

	<p>- One (1) technician appointed by Mr. Meza</p>	
<p>2</p>	<p><b>NRW Reduction Management Team</b></p> <p>The members of the NRW Reduction Management Team are listed as follows:</p> <ul style="list-style-type: none"> <li>- Mr. Antonio Viera</li> <li>- Mr. Alexander Recinos</li> <li>- Ms. Alba Daysi Driotes de Paz</li> <li>- Mr. Mauricio Dominguez</li> </ul> <p>According to discussions held last March, two (2) additional members are required, namely one (1) from the financial section and one (1) for public relation (PR) activities.</p> <p>Mr. Viera said that he will arrange the allocation of these members required for the working team as soon as possible.</p> <p>Finally, Mr. Mamiya reminded Mr. Viera about the official letter with the names of the members which was supposed to be issued by the president of ANDA according to Ms. Karla. In response to this, Mr. Viera expressed that he will discuss with Ms. Karla, to try to finalize the letter ready and signed by tomorrow (June 30, 2009).</p>	
<p>3</p>	<p><b>Program of Activities for the SPT and NRW Reduction Management Team</b></p> <p><u>Sewerage Planning Team (SPT)</u></p> <p>Mr. Wada is preparing a training program on Sewerage Planning which is scheduled to begin tomorrow morning at 9 am.</p> <p>A schedule was presented to Mr. Viera as follows:</p> <ul style="list-style-type: none"> <li>Class start 9:00 – 12:00</li> <li>Planning, June 30, July 1, 2, 6, 7, 8</li> <li>Legislation, July 9</li> <li>O&amp;M, July 10, 13, 14</li> <li>Human Resource, July 14</li> <li>Financial Resource, July 15, 16</li> <li>Making the contents of Manual, July 17, 20</li> </ul> <p>Mr. Viera agrees with the schedule and will try to attend as many sessions as possible. Mr. Wada pointed out that the SPT will have a weekly meeting to discuss:</p> <ul style="list-style-type: none"> <li>What the Team did this week (Activities)</li> <li>What the team learned this week</li> <li>What the problems were found and how the team solved them</li> <li>What the team will do next week</li> <li>Other information should be shared</li> </ul> <p>Understanding Mr. Viera's busy working schedule, his participation at least weekly meetings was requested.</p> <p><u>NWR Reduction Management Team</u></p> <p>There is more time for the program of activities of the NWR Reduction Management Team; therefore, this topic shall be discussed further once the official letter of team members is ready.</p>	

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4	<p><b>Request arrangements of field trip to La Union</b></p> <p>Mr. Wada and Mr. Mamiya would like to have a field visit to La Union and Conchagua to know and understand more about the condition of the sewerage system. Such field visit should be arranged if possible for next week. The JICA Experts would travel in one vehicle with, and ANDA staff accompanying the Japanese Experts (Mr. Flavio Meza was mentioned) should arrange their transportation and security for the team.</p> <p>The idea was agreed upon by Mr. Viera, who also stated his wish to accompany the JICA experts himself, and the necessary arrangements shall be made promptly.</p>	
	Actions to be taken	by Whom
		until When

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Project for Capacity Development of ANDA for Operati

Prepared by, Mr. Flavio Meza, ANDA.

Translated by Ms Mariana

Date: July 10, 2009

## Record of Meeting/Discussion

<b>Date:</b>	9 de julio 2009	<b>Time:</b>	from 8:00 to 10:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	<b>Name</b>	<b>Position</b>	<b>Department/Organization</b>
1-	Armando Ramirez	Gerente de Infraestructura	ANDA
2-	Victor Corpeño	Subgerente de Planificacion	ANDA
3-	Celia de Mena	Jefe Unidad de Gestion Ambiental	ANDA
4-	Martha Nuila	Tecnico Area de Saneamiento	ANDA
5-	Gladys Rodriguez	Tecnico Area de Saneamiento	ANDA
6-	Flavio Meza	Encargado Area Saneamiento	ANDA
<b>Attendants JICA Exparts (Name)</b>			
	Mr. Tetsuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Taller sobre Alcantarillado Sanitario			
2. Reuniones semanales			
1. <a href="#">Sewerage Planning Training start</a>			
2. <a href="#">Weekly Meeting</a>			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<ul style="list-style-type: none"> <li>- Se presentó el programa de estudios para la capacitacion de planificacion de alcantarillado sanitario</li> <li>- Se distribuirá el tiempo de la siguiente forma : 4 sesiones para tratar sobre la planificacion de alcantarillado sanitario 1 sesion para tratar sobre legislacion, operacion y mantenimiento, recursos financieros y recurso humano</li> <li>- Se dio inicio al programa de capacitacion y se trataron los siguientes temas : ❖ Procedimientos generales para desarrollar un plan de alcantarillado ❖ Periodo de diseño ❖ Identificacion del area de planificacion ❖ Estimacion de la Poblacion</li> <li>- <a href="#">The syllabus for the sewerage planning training was presented.</a></li> <li>- <a href="#">The time will be managed as follows</a> <a href="#">4 sessions for sewerage planning.</a> <a href="#">1 session for legislation, operation and maintenance, financial resource and human resource.</a></li> <li>- <a href="#">The following topics were discussed :</a> ❖ <a href="#">General procedures to develop a sewerage plan</a> ❖ <a href="#">Design period</a> ❖ <a href="#">Identification of the planning area</a> ❖ <a href="#">Population estimation</a></li> </ul>		
2	<ul style="list-style-type: none"> <li>- Se acordó modificar la hora de inicio del taller y ampliar a 4 horas la jornada diaria del taller</li> <li>- <a href="#">The time of the start of the training was changed and the next session shall be extended to 4 hours.</a></li> </ul>		
	<b>Actions to be taken</b>	<b>by Whom</b>	<b>until When</b>
	- Se continuará con el taller el día lunes 13/07/09 a las 8:15.	- ANDA	
	- <a href="#">The next session shall be on Monday 13/07/09 at 8:15.</a>	- ANDA	

Date: 10 de julio de 2009 by: Mr. Flavio Meza, ANDA

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Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA,  
Translated by Ms Mariana  
Date: July 13, 2009

## Record of Meeting/Discussion

<b>Date:</b>	13 de julio 2009	<b>Time:</b>	from 8:00 to 12:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	Name	Position	Department/Organization
1-	Ernesto Castellanos	Tecnico Unidad de Gestion Ambiental	ANDA
2-	Victor Corpeño	Subgerente de Planificacion	ANDA
3-	Celia de Mena	Jefe Unidad de Gestion Ambiental	ANDA
4-	Martha Nuila	Tecnico Area de Saneamiento	ANDA
5-	Gladys Rodriguez	Tecnico Area de Saneamiento	ANDA
6-	Claudia Arnaza	Coordinadora Area Saneamiento RC	ANDA
7-	Flavio Meza	Encargado Area Saneamiento	ANDA
<b>Attendants JICA Experts (Name)</b>			
	Mr. Tetsuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Inicio Taller sobre Alcantarillado Sanitario			
1. Sewerage Planning Training			
Topic	Contents of Discussion		Conclusion
1	<ul style="list-style-type: none"> <li>- Se continuo con el programa de estudios para la capacitacion de planificacion de alcantarillado sanitario</li> <li>- Se dio seguimiento al programa de capacitacion y se trataron los siguientes temas :                             <ul style="list-style-type: none"> <li>❖ Calculo del caudal de aguas residuales</li> <li>❖ Diseño de alcantarillados</li> <li>❖ Calculos Hidraulicos</li> <li>❖ Diseño de plantas de tratamiento</li> <li>❖ Sedimentacion Primaria</li> <li>❖ Procesos aerobicos : lodos activados, filtro percolador, laguna de estabilizacion, bio discos, reactor SBR</li> <li>❖ Procesos anaerobicos : UASB</li> <li>❖ Sedimentacio secundaria</li> <li>❖ Fosa Septica</li> </ul> </li> <li>- The sewerage training program was continued with</li> <li>- The training program was followed up and the following topics were discussed :                             <ul style="list-style-type: none"> <li>❖ Calculation of wastewater flow</li> <li>❖ Sewerage design</li> <li>❖ Hydraulic calculations</li> <li>❖ Design of treatment plants</li> <li>❖ Primary sedimentation</li> <li>❖ Aerobic processes : activated sludge, trickling filter, stabilization pond, SBR reactor</li> <li>❖ Anaerobic processes : UASB</li> <li>❖ Secondary sedimentation</li> <li>❖ Septic tank</li> </ul> </li> </ul>		
	Actions to be taken	by Whom	until When
	- Se continuará con el taller el día martes 14/7/09 a las 8:15. - The next session shall be on Tuesday 14/07/09 at 8:15	- ANDA - ANDA	

Date: 13 de julio de 2009 by : Mr. Flavio Meza, ANDA



Form RMD

Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA.  
Translated by Ms Mariana  
Date: July 21, 2009

## Record of Meeting/Discussion

<b>Date:</b>	14 de julio 2009	<b>Time:</b>	from 8:00 to 12:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	<b>Name</b>	<b>Position</b>	<b>Department/Organization</b>
1-	Ernesto Castellanos	Tecnico Unidad de Gestion Ambiental	ANDA
2-	Victor Corpeño	Subgerente de Planificacion	ANDA
3-	Martha Nuila	Tecnico Area de Saneamiento	ANDA
4-	Gladys Rodriguez	Tecnico Area de Saneamiento	ANDA
5-	Flavio Meza	Encargado Area Saneamiento	ANDA
<b>Attendants JICA Exparts (Name)</b>			
	Mr. Tetsuo WADA		
	Srta. Manana (interprete)		
<b>Main Subject:</b>			
1. Inicio Taller sobre Alcantarillado Sanitario			
1 Sewerage Training Course			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<ul style="list-style-type: none"> <li>- Se continuo con el programa de estudios para la capacitacion de planificacion de alcantarillado sanitario</li> <li>- Se dio seguimiento al programa de capacitacion y se trataron los siguientes temas :                             <ul style="list-style-type: none"> <li>❖ Desinfeccion</li> <li>❖ Tratamiento de fangos</li> <li>❖ Estimacion del volumen de fangos</li> <li>❖ Tratamiento de fangos</li> <li>❖ Secado o deshidratado de lodos</li> <li>❖ Se realizò un ejercicio en el cual se determinò el area necesaria para tratar un caudal estimado de 250.000 m<sup>3</sup>/d, el cual corresponde al producido en el AMSS</li> <li>❖ El area requerida para la planta es de 400 por 270 metros, se identifico un sector en el cual se puede ubicar la planta</li> <li>❖ Analisis economico de proyectos</li> </ul> </li> <li>- The syllabus was continued in the sewerage training course.</li> <li>- The training program was followed up, and the following topics were addressed :                             <ul style="list-style-type: none"> <li>❖ Disinfection.</li> <li>❖ Sludge treatment.</li> <li>❖ Estimation of sludge volume.</li> <li>❖ Sludge dewatering.</li> <li>❖ An exercise was made, determining the necessary area to treat an estimated flow of 250.000 m<sup>3</sup>/d which corresponds to the flow produced in the AMSS (Metropolitan Area of San Salvador).</li> <li>❖ The area required for the plant is of 400 times 270 metres, identifying a sector in which the plant can be located.</li> <li>❖ Economic analyses of projects.</li> </ul> </li> </ul>		
<b>Actions to be taken</b>		<b>by Whom</b>	<b>until When</b>
- Se continuará con el taller el día lunes 20/7/09 a las 8:15.		- ANDA	
- The next training session is on Monday 20/7/09 at 8:15.		- ANDA	

Date: 17 de julio de 2009 by: Mr. Flavio Meza, ANDA

Form RMD

Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA,  
Translated by Ms Mariana  
Date: July 21, 2009

## Record of Meeting/Discussion

<b>Date:</b>	20 de julio 2009	<b>Time:</b>	from 8:15 to 11:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	<b>Name</b>	<b>Position</b>	<b>Department/Organization</b>
1-	Ernesto Castellanos	Tecnico Unidad de Gestion Ambiental	ANDA
2-	Victor Corpeño	Subgerente de Planificacion	ANDA
3-	Celia de Mena	Jefe Unidad de Gestion Ambiental	ANDA
4-	Martha Nuila	Tecnico Area de Saneamiento	ANDA
5-	Gladys Rodriguez	Tecnico Area de Saneamiento	ANDA
6-	Claudia Amaza	Coordinadora Area Saneamiento RC	ANDA
7-	Flavio Meza	Encargado Area Saneamiento	ANDA
<b>Attendants JICA Experts (Name)</b>			
	Mr. Tetsuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Inicio Taller sobre Alcantarillado Sanitario			
1. Sewerage Training Course			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<ul style="list-style-type: none"> <li>- Se continuo con el programa de estudios para la capacitacion de planificacion de alcantarillado sanitario</li> <li>- Se dio seguimiento al programa de capacitacion y se tratò sobre la Operacion y Mantenimiento de alcantarillado</li> <li>- Programa de actividades para los meses de julio, agosto y septiembre</li> <li>- Se definieron los temas a incorporar dentro del manual de alcantarillado</li> <li>- Se recomienda se incorpore personal del Area Juridica y Financiera, para tratar los temas del manual</li> <li>- The syllabus was continued in the sewerage training course.</li> <li>- The training program was followed up and the topic of operation and maintenance was addressed.</li> <li>- Program of activities for the months of July, August and September was planned.</li> <li>- The topics to incorporate as contents of the sewerage planning manual were defined.</li> <li>- It is recommended that staff from the legal and financial sections are incorporated in the elaboration of such topics for the manual.</li> </ul>		
<b>Actions to be taken</b>		<b>by Whom</b>	<b>until When</b>
<ul style="list-style-type: none"> <li>- Se deberá enviar presentacion sobre avances del equipo de alcantarillado a Manuel Rivera para su consolidadicon.</li> <li>- Se deberán realizar reuniones periodicas para tratar sobre el avance del manual y enviar minutas a Manuel Rivera</li> <li>- The presentation on the progress of the sewerage planning team should be sent to Mr. Manuel Rivera, who will put the presentations of all teams together to prepare the material for handout in the monthly progress meeting.</li> <li>- Periodic meetings shall be carried out to deal with the progress of the manual, and the memos of these meetings shall be sent to Mr. Manuel Rivera.</li> </ul>		<ul style="list-style-type: none"> <li>- ANDA</li> <li>- ANDA</li> </ul>	

Date: 20 de julio de 2009 by: Mr. Flavio Meza, ANDA

Form RMD

Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA.  
Translated by Mr. Manuel Rivera  
Date: August 20, 2009

## Record of Meeting/Discussion

<b>Date:</b>	13 de agost de 2009	<b>Time:</b>	de	10:00	a	12:00
<b>Venue:</b>	Oficina Central de ANDA					
<b>Meeting/Discussion among</b>						
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)			
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)			
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team			
<input type="checkbox"/>	Others					
<b>Attendants El Salvador side</b>						
	Name		Position		Department/Organization	
1-	Ernesto Castellanos		Técnico de Unidad Ambiental		ANDA	
2-	Martha Nuila		Técnico de Alcantarillado		ANDA	
3-	Gladys Rodriguez		Técnico de Alcantarillado		ANDA	
<b>Attendants JICA Exparts (Name)</b>						
<b>Main Subject:</b>						
1. Elaboracion del Manual de Alcantarillado						
1. Elaboration of Sewerage Manual						
<b>Topic</b>	<b>Contents of Discussion</b>				<b>Conclusion</b>	
1	<ul style="list-style-type: none"> <li>- Elaboracion de la presentacion relacionado al progreso de la elaboración del manual de alcantarillado.</li> <li>- Compilation of enviroment laws related with Sewerage.</li> <li>- Resumen de leyes ambientales relaciones con alcantarillado</li> <li>- Elaboration of presentation about progress of Sewerage PLaning Mamial</li> <li>- Compilation of enviroment laws related with Sewerage.</li> </ul>					
<b>Actions to be taken</b>			<b>by Whom</b>		<b>until When</b>	
- Ernesto Castellanos, hará el resumen de las leyes ambientales			- ANDA			
- Ernesto Castellanos, will make a resume of enviromental laws			- ANDA			

Fecha: 20 de agosto de 2009 Hecho por : Mr. Flavio Meza, ANDA



Form RMD

Project for Capacity Development of ANDA for Operational Improvement

## Record of Meeting/Discussion

Prepared by Mr. Flavio Meza, ANDA  
Translated by Mr. Manuel Rivera  
Date: August 21, 2009

<b>Date:</b>	Agosto 21, 2009	<b>Time:</b>	from	14:00	to	15:00
<b>Venue:</b>	ANDA Oficina de Unidad de Planificación					
<b>Meeting/Discussion among</b>						
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)			
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)			
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team			
<input type="checkbox"/>	Others					
<b>Attendants El Salvador side</b>						
	Name		Position		Department/Organization	
	Ing. Yaneth Díaz		Technical Director		ANDA	
	Ing. Flavio Meza		SEWERAGE		ANDA	
	Ing. Milton Portillo		Planification Unit		ANDA	
	Ing. Marta Nuila		SEWERAGE		ANDA	
	Ing. Gladys Rodriguez		SEWERAGE		ANDA	
	Ing. Celia de Mena		UGA (Environment)		ANDA	
	Ing. Claudia Arriaza		Central Region		ANDA	
	Ing. Ernesto Castellanos		UGA		ANDA	
<b>Attendants JICA (Name)</b>						
	Ms. Manuel Rivera (Project Assistant)					
<b>Main Subject:</b>						
	<ol style="list-style-type: none"> <li>Avances de Elaboración de Manual de Alcantarillado</li> <li>Programación de reuniones semanales.</li> </ol>					
	<ol style="list-style-type: none"> <li>Sewerage Planning Manual Advances</li> <li>Programation of weekly meetings.</li> </ol>					
<b>Topic</b>	<b>Contents of Discussion</b>					<b>Conclusion</b>
1.	<p>Es necesario que el equipo de alcantarillado remita avances de elaboración.</p> <p>Ing. Meza explica que se ha trabajado en la recopilación de información que requiere el manual. Explica información técnica a través de su laptop. Agrega que para recopilar esta información ha sido necesario hacer varias visitas de campo.</p> <p>Ms. Yaneth Díaz explica que necesitan el apoyo de este equipo para que sea enviado un reporte semanal para remitirlo al Sr. WADA, para que sepa en que etapa de elaboración se encuentra dicho manual.</p> <p>Mr. Manuel explica que esta información es requerida también para efecto que sean traducidos, eso puede implicar pérdida de tiempo si ANDA envía toda la información de una sola vez, es preferible mandarla semanalmente.</p> <p>Is necessary that Sewerage Planning Manual Team provide all advances of elaboration.</p> <p>Ing. Meza says that they have worked in gathering and complete all the information that manual requires. He explains all technical information in laptop. He mention also that to gather the information they have made field visits.</p> <p>Ms. Yaneth Díaz explains that they need to provide weekly report in order to send it to Mr. Wada so he can know in what part of elaboration ANDA is working.</p> <p>Mr. Manuel explains that this information is needed in also in order of translation, that can take more time of translation if ANDA sends the information all at the same time. That's why is necessary to send it weekly.</p>					



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Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA.  
Translated by Mr. Manuel Rivera  
Date: August 28, 2009

## Record of Meeting/Discussion

<b>Date:</b>	28 de agost, 2009	<b>Time:</b>	from	14:00	to	15:00
<b>Venue:</b>	ANDA Oficina de Planificación					
<b>Meeting/Discussion among</b>						
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)			
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)			
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team			
<input type="checkbox"/>	Others					
<b>Attendants El Salvador side</b>						
	Name		Position		Department/Organization	
	Ing. Flavio Meza		SEWERAGE		ANDA	
	Ing. Milton Portillo		Planification Unit		ANDA	
	Ing. Marta Nuila		SEWERAGE		ANDA	
	Ing. Gladys Rodriguez		SEWERAGE		ANDA	
	Ing. Claudia Arriaza		Central Region		ANDA	
	Ing. Ernesto Castellanos		UGA		ANDA	
<b>Attendants JICA (Name)</b>						
	Ms. Manuel Rivera (Project Assistant)					
<b>Main Subject:</b>						
<ol style="list-style-type: none"> <li>1. Avances del manual de Alcantarillado.</li> <li>2. Sigüientes Temäs y reuniones.</li> </ol> <ol style="list-style-type: none"> <li>1. Sewerage Planning Manual Advances</li> <li>2. Next topics</li> </ol>						
<b>Topic</b>	<b>Contents of Discussion</b>					<b>Conclusion</b>
1	<p>Lic. Ventura pregunta cual es el proposito fundamental del manual. Equipo explica que el manual tendrá información técnica para elaborar el manual de plan de alcantarillado.</p> <p>Ing. Nuila manifiesta que es necesario que ANDA reconozca cuales son las necesidades y los objetivos, analizar capacidad financiera a largo plazo.</p> <p>Second Advance</p> <p>Lic. Ventura asks about the pursope of manual, teams explains that the manual will have technical information in order to make plans of sewerage.</p> <p>Ing. Nuila suggest that is necessary that ANDA recognized what goals they need and are able to achieve, economic capacity and long terms.</p>					

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2	<p>Mr. Ventura pregunta sobre la ley que se pondrá en el manual.</p> <p>Ing. Castellanos argumenta que aun estan trabajando en la ley. Ellos la enviarán la próxima semana a todo el equipo.</p> <p>Mr. Ventura asks about LAW</p> <p>Ing. Castellanos says that they are still working on it. They wil send it next week to all the team</p>		
3	<p>Mr. Flavio Meza explica que se ha trabajado en lo siguiente:</p> <ul style="list-style-type: none"> <li>• Reactores Anaeróbicos</li> <li>• Lagunas</li> <li>• Operacion y Mantenimiento, personal en esta actividad.</li> <li>• Tabla de Contenidos.</li> <li>• Planificación de Sistemas de Alcantarillado.</li> </ul> <p>Mr. Flavio Meza explains that they are working on the information about:</p> <ul style="list-style-type: none"> <li>• Anaerobic reactors</li> <li>• Lagoon</li> <li>• Operation and Maintenance, also personal of this activity</li> <li>• Table of contents</li> <li>• Sewerage network planification</li> </ul>		
Actions to be taken		by Whom	until When
<ul style="list-style-type: none"> <li>• Ing. Castellanos enviará la información al equipo.</li> <li>• Ing. Meza enviará información previo a la próxima reunión para remitirla a Manuel/Mariana el jueves 3.</li> <li>• Próxima reunión Jueves 3</li> </ul> <p>Ing. Castellanos will send all law information to the team.</p> <p>Ing. Meza will send all information before discussion, in order to send it to Mr Manuel /Mariana n Thursday 3</p> <p>Next meeting on Thursday 3</p>			

Fecha: 28 de agosto de 2009 Hecho por : Mr. Flavio Meza, ANDA



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Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA,  
Translated by Mr. Manuel Rivera  
Date: September 3, 2009

## Record of Meeting/Discussion

<b>Date:</b>	Septiembre 3 del 2009	<b>Time:</b>	from	14:00	to	15:00
<b>Venue:</b>	ANDA Oficina de Unidad de Planificación					
<b>Meeting/Discussion among</b>						
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)			
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)			
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team			
<input type="checkbox"/>	Others					
<b>Attendants El Salvador side</b>						
	Name		Position		Department/Organization	
	Ing. Flavio Meza		SEWERAGE		ANDA	
	Lic. Zenia Beatriz Campos		Planification Unit		ANDA	
	Ing. Marta Nuila		SEWERAGE		ANDA	
	Ing. Ernesto Castellanos		Unit Enviroment		ANDA	
<b>Attendants JICA (Name)</b>						
	Mr. Manuel Rivera (Project Assistant)					
<b>Main Subject:</b>						
<ol style="list-style-type: none"> <li>1. Avances de Elaboración de Manual de Alcantarillado</li> <li>2. Programación de reuniones semanales.</li> </ol> <ol style="list-style-type: none"> <li>1. <a href="#">Elaboration of Sewerage Manual</a></li> <li>2. <a href="#">Next Week Activities</a></li> </ol>						
<b>Topic</b>	<b>Contents of Discussion</b>					<b>Conclusion</b>
1	<p>Ing. Meza presento el tercer avance a través de su laptop, acerca de los Reactores Anaeróbicos de Flujo Ascendente denominados RAFA, el cual se remitió a la JICA.</p> <p>Ing. Ernesto Castellanos hablo acerca del primer borrador informe de la legislación y se discutió unas modificaciones que se deben de realizar a estas, para la próxima reunión.</p> <p>En esta ocasión se contó con una nueva representante de la Unidad de Planificación la Lic. Zenia Campos.</p> <p><a href="#">Ing. Meza presented 3rd advance thru his laptop, this information is related with Anaerobic Reactors of ascending flow denominated RAFA, this was submitted to JICA.</a></p> <p><a href="#">Ing. Ernesto Castellano spoke about first rough copy of legal inform and modifications where discussed in order to work on them on next meeting.</a></p> <p><a href="#">In this meeting we had Lic. Zenia Campos in representation of Planification Unit.</a></p>					

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2	<p>La próxima reunión será el 10 de Septiembre a las 2:pm</p> <p>Mr. Flavio presentara el cuarto avance del manual.</p> <p>Mr. Castellanos presentara el segundo avance de la parte de la legislación.</p> <p>Queda pendiente de que la Lic. Amiaza del área de saneamiento de la región central presente el manual de la planta de tratamiento de San Juan Opico, para ser agregada al manual como experiencia de ANDA.</p> <p><i>Next meeting will be September 10 at 2:pm</i></p> <p><i>Mr. Falvio will present 4th advance of manual</i></p> <p><i>Mr. Castellanos will present second advance of legal information,</i></p> <p><i>We are still waiting for Lic. Claudia Amaza in order to present manual of San Juan Opico Treatment Plant with the purpose to add this to the manual like ANDA experience</i></p>		
	Actions to be taken	by Whom	until When

Date: 3 de septiembre de 2009 by: Mr. Flavio Meza, ANDA

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Project for Capacity Development of ANDA for Operational Improvement

Prepared by\_ Mr. Flavio Meza, ANDA.  
Translated by Mr. Manuel Rivera  
Date: September 10, 2009

## Record of Meeting/Discussion

<b>Date:</b>	Septiembre 10 del 2009	<b>Time:</b>	from	14:00	to	15:00
<b>Venue:</b>	ANDA Oficina de Unidad de Planificación					
<b>Meeting/Discussion among</b>						
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)			
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)			
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team			
<input type="checkbox"/>	Others					
<b>Attendants El Salvador side</b>						
	Name		Position		Department/Organization	
	Ing. Flavio Meza		SEWERAGE		ANDA	
	Lic. Zenia Beatriz Campos		Planification Unit		ANDA	
	Ing. Marta Nuila		SEWERAGE		ANDA	
	Ing. Ernesto Castellanos		Unit Enviroment		ANDA	
<b>Attendants JICA (Name)</b>						
	Mr. Manuel Rivera (Project Assistant)					
<b>Main Subject:</b>						
<ol style="list-style-type: none"> <li>1. Avances y elaboración de manual.</li> <li>2. Preparacion de programación.</li> </ol> <ol style="list-style-type: none"> <li>1. <a href="#">Advances and elaboration of Swerage Planing Manual.</a></li> <li>2. <a href="#">Meeting Programation</a></li> </ol>						
<b>Topic</b>	<b>Contents of Discussion</b>					<b>Conclusion</b>
1	<p>Mr. Ernesto Castellanos present algunas modificaciones a las leyes estipuladas para el manual.</p> <p>Ing. Meza explica aspect técnicos de informacion relacionada al manual.</p> <p><a href="#">Mr. Ernesto Castellanos presents modifications in Law.</a></p> <p><a href="#">Ing. Meza explains technical advances to the Team</a></p>					
2	<p>Se enviará la información al equipo y posteriormente a Manuel Rivera para que inicie su traducción.</p> <p><a href="#">They will send all the team digital information in order to be revised. After this will be send to Mr. Manuel in order to translaton.</a></p>					
<b>Actions to be taken</b>			<b>by Whom</b>		<b>until When</b>	

Date: 10 de septiembre de 2009 by: Mr. Flavio Meza, ANDA

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Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA,  
Translated by Mr Emilio Sura  
Date: October 9, 2009

## Record of Meeting/Discussion

<b>Date:</b>	23 de septiembre de 2009	<b>Time:</b>	from 2:00 to 13:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	Name	Position	Department/Organization
1-	Martha Nuila	Inga. Area Saneamiento	ANDA
2-	Celia de Mena	Jefe UGA	ANDA
3-	Gladys Rodriguez	Inga. Area de Saneamiento	ANDA
4-	Ernesto Castellanos	Colaborador UGA	ANDA
5-	Beatriz Campos	Colaborador Planificacion	ANDA
6-	Alfonso Ramirez	Gerente Infraestructura	ANDA
7-	Flavio Meza	Encargado Saneamiento	ANDA
<b>Attendants JICA Expats (Name)</b>			
	Mr. Testuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Analisis de los resultados			
<b>1. Results of analysis</b>			
Topic	Contents of Discussion		Conclusion
1	<ul style="list-style-type: none"> <li>- Se presentaron los resultados de los consumos de agua y analisis de calidad de agua.</li> <li>- Results of water consumption and water quality analysis were presented.</li> </ul>		
Actions to be taken		by Whom	until When
- Nueva reunion el dia 24 de septiembre de 2009 a las 2:00 pm		- ANDA	
- New meeting on Sep 24th at 2:00 pm		- ANDA	

Date: 24 de septiembre de 2009 by: Mr. Flavio Meza, ANDA



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Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA,  
Translated by Mr Emilio Sura  
Date: October 9, 2009

## Record of Meeting/Discussion

<b>Date:</b>	24 de septiembre de 2009	<b>Time:</b>	from 2:00 to 16:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	Name	Position	Department/Organization
1-	Martha Nuila	Inga. Area Saneamiento	ANDA
2-	Claudia Arriaza	Encargada Saneamiento RC	ANDA
3-	Gladys Rodriguez	Inga. Area de Saneamiento	ANDA
4-	Ernesto Castellanos	Colaborador UGA	ANDA
5-	Beatriz Campos	Colaborador Planificacion	ANDA
6-	Alfonso Ramirez	Gerente Infraestructura	ANDA
7-	Flavio Meza	Encargado Saneamiento RM	ANDA
<b>Attendants JICA Experts (Name)</b>			
	Mr. Testuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Seguimiento a la elaboracion del plan de alcantarillado			
1. Sewerage plan elaboration follow up			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<ul style="list-style-type: none"> <li>- Seguimiento a elaboracion del manual de alcantarillado</li> <li>- Sewerage plan elaboration follow up</li> </ul>		
<b>Actions to be taken</b>		<b>by Whom</b>	<b>until When</b>
- Nueva reunion el dia 28 de septiembre de 2009 a las 2:00 pm		- ANDA	
- New meeting on Sep 28th at 2.00 pm		- ANDA	

Date: 26 de septiembre de 2009 by: Mr. Flavio Meza, ANDA

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Project for Capacity Development of ANDA for Operational Improvement

Prepared by: Mr. Flavio Meza, ANDA,  
Translated by Mr Emilio Sura  
Date: October 9, 2009

## Record of Meeting/Discussion

<b>Date:</b>	28 de septiembre de 2009	<b>Time:</b>	from 2:00 to 16:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Severage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	Name	Position	Department/Organization
1-	Martha Nuila	Inga. Area Saneamiento	ANDA
2-	Claudia Arnaza	Encargada Saneamiento RC	ANDA
3-	Ernesto Castellanos	Colaborador UGA	ANDA
4-	Beatriz Campos	Colaborador Planificacion	ANDA
5-	Flavio Meza	Encargado Saneamiento RM	ANDA
<b>Attendants JICA Exparts (Name)</b>			
	Mr. Testuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Seguimiento a la elaboracion del plan de alcantarillado			
1. Sewerage plan elaboration follow up			
Topic	Contents of Discussion		Conclusion
1	<ul style="list-style-type: none"> <li>- Seguimiento a elaboracion del manual de alcantarillado</li> <li>- Sewerage plan elaboration follow up</li> </ul>		
Actions to be taken		by Whom	until When
- Nueva reunion el dia 30 de septiembre de 2009 a las 10:00 am		- ANDA	
- New meeting on sep 30th 2009 at 10.00 am		- ANDA	

Date: 29 de septiembre de 2009 by: Mr. Flavio Meza, ANDA

Form RMD

Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA,  
Translated by Mr Emilio Sura  
Date: October 9, 2009

## Record of Meeting/Discussion

<b>Date:</b>	30 de septiembre de 2009	<b>Time:</b>	from 10:00 to 16:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	Name	Position	Department/Organization
1-	Martha Nuila	Inga. Area Saneamiento	ANDA
2-	Claudia Arriaza	Encargada Saneamiento RC	ANDA
3-	Ernesto Castellanos	Colaborador UGA	ANDA
4-	Celia de Mena	Jefe UGA	ANDA
5-	Gladys Rodriguez	Inga. Area Saneamiento	ANDA
6-	Flavio Meza	Encargado Saneamiento RM	ANDA
<b>Attendants JICA Experts (Name)</b>			
	Mr. Testuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Seguimiento a la elaboracion del plan de alcantarillado			
1. Sewerage plan elaboration follow up			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<ul style="list-style-type: none"> <li>- Seguimiento a elaboracion del manual de alcantarillado</li> <li>- Sewerage plan elaboration follow up.</li> </ul>		
<b>Actions to be taken</b>		<b>by Whom</b>	<b>until When</b>
- Nueva reunion el dia 1 de octubre de 2009 a las 3:00 pm		- ANDA	
- New meeting on October 1st at 3:00 pm		- ANDA	

Date: 1 de octubre de 2009 by : Mr. Flavio Meza, ANDA

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Project for Capacity Development of ANDA for Operational Improvement

Prepared by Mr. Flavio Meza, ANDA,  
Translated by Mr Emilio Sura  
Date: October 9, 2009

## Record of Meeting/Discussion

<b>Date:</b>	1 de octubre de 2009	<b>Time:</b>	from 15:00 to 16:00
<b>Venue:</b>	ANDA Head Office		
<b>Meeting/Discussion among</b>			
<input type="checkbox"/>	NRW Reduction Management Team	<input type="checkbox"/>	NRW Reduction Action Team (Metropolitan)
<input type="checkbox"/>	NRW Reduction Action Team (Central)	<input type="checkbox"/>	NRW Reduction Action Plan (Western)
<input type="checkbox"/>	Power-Saving Management Team	<input checked="" type="checkbox"/>	Sewerage Planning Team
<input type="checkbox"/>	Others		
<b>Attendants El Salvador side</b>			
	<b>Name</b>	<b>Position</b>	<b>Department/Organization</b>
1-	Martha Nuila	Inga. Area Saneamiento	ANDA
2-	Claudia Arriaza	Encargada Saneamiento RC	ANDA
3-	Alfonso Ramirez	Gerente Infraestructura	ANDA
4-	Flavio Meza	Encargado Saneamiento RM	ANDA
<b>Attendants JICA Exparts (Name)</b>			
	Mr. Testuo WADA		
	Srta. Mariana (interprete)		
<b>Main Subject:</b>			
1. Seguimiento a la elaboracion del plan de alcantarillado			
1. Sewerage plan elaboration follow up			
<b>Topic</b>	<b>Contents of Discussion</b>		<b>Conclusion</b>
1	<ul style="list-style-type: none"> <li>- Seguimiento a elaboracion del manual de alcantarillado</li> <li>- Sewerage plan elaboration follow up</li> </ul>		
<b>Actions to be taken</b>		<b>by Whom</b>	<b>until When</b>
-6 de octubre presentacion del manual		- ANDA	
-Manual Presentation by Oct. 6th		-ANDA	

Date: 1 octubre de 2009 by: Mr. Flavio Meza, ANDA