FINAL DATA REPORT Rev. 2 GEOTECHNICAL EXPLORATION AND TESTING

TURKEY POINT COL PROJECT FLORIDA CITY, FLORIDA

October 6, 2008

VOLUME 4
Appendix G – Groundwater Data

Prepared By:

MACTEC Engineering and Consulting, Inc. Raleigh, North Carolina

MACTEC Project No. 6468-07-1950

Prepared For:

Bechtel Power Corporation Subcontract No. 25409-102-HC4-CY00-00001

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To: Tom Mc-DANIEL

Folio #: 30-7034000-0010

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☐ Southwest ☐ Northwest ☐ St. Johns River ⓒ South Florida ☐ Suwannis River	THIS FORM MINET BE FILLED OUT COMPLETELY. The water well contractor is responsible for completing form and forwarding the permit to the appropriate detegrantly where applicable.

form and ferwarding the permit to the appropriate delegated county where applicable.

Permit No. 12-159-7741 Fiorida Unique I.D. 20-7034-001-0	PIR
Permit Stipulations Required (See attached)	
62-524 well [] SUP Application No.	
APPROVED TO THE CONCENSION OF THE	

	CHECK BOX FOR I PRECIPILATE DISTRICT, ADDRESS ON BACK OF PERAIT FORM.	TORDON A MAJORIN
1.	Florida Power and Light Company, Attn: Mr. Ed Paula 9700 SW 344 Street Florida City 3303	4 305-246-6407
"	Owner, Legal Name of Entity & Corporation Address City Zic	Telephone Number
,	2. Turkey Point Nuclear Generating Station - coordinates of proposed wells attached 2760 740 344	7457
•	Well Location Address, Hoad Name or Number, City Home 5/4 ag 4	157035
	MACTEC Engineering and Consulting, Inc Phillip K. Pitts FL # 11035 404-873-4	761
J.	Well Drilling Contractor License No. Telephone No.	O. NW NE
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١	prior to communicated of seal conglished in . I brigher perify their all information provided on this application, and accurate and imprired policy representation provided in the seal of	2/19/04
1	1/035	
L	Digniture of Contractor License No. Digniture	Dete
	DIS NOT WRITE DELOW THIS LINE - LOR OFFICIAL USE ONLY	
	Approved Granded By: AGTERD EDW 1805 Issue Date: 1908 Hydrol	oglet Approval
	Consider Toloristal	1211 Children
		ふん・カ ア レドラ クレト
	Owner Number: Fee Facewad: \$ 90 Receipt No: 1000010406 Check Enter numerical month, day and full, four-digit year.	NO.

Farm 0128 Rev. 4/95 \3-WD-338/5

Ī	. {		STATE OF FLORIDA I REPAIR, MODIFY, OR CONTINUES CONTINUE	THIS FORM WUST'S THE WAIST WILL CONTR. THE WAIST WILL CONTR. TOTAL END RESS ON BACK O	ELL general responsion in the permit to the black. DE PERMIT FORM.	COMPLETELY. ble for completing this appropriate delegated		irad (See situched)
	1,		nd Light Company, Att			344 Street Flori	da City 33034	305-246-6407
١		Owner, Legal Name of E	•		dress	City	Zip	Talephone Number
-{			clear Generating Stati s, Fload Name or Number, City		or propose	d Mens attached		
١, ١		MACTEC Engin	eering and Consulting	. Inc Phillip K.	Pitts FL#	11035	404-873-47	61
	Э,	Well Drilling Contractor		License	No.		Telephone No.	NW NE
Ś		396 Plasters Ave	nne		4.	NW 1/4 of NW (biggest	1/4 of Section 34	X
8		Address	at.	20244			findicate Wallon Chy	n)
		Atlanta Civ	Georgia State	30324 Zin	<u> </u>	Township 575	Hange 40E	
		Miami-Dade		-ch	. N/A	. N/A.	. N/A	}
	Ų.	County	Subdivision	n Name	Lot	Block	Link	BW SE
ł	_	No towned	vallo 1 Chack the use			Name	otle Markey (here) Obj	servation well
	8. 9. 10. 11.	imigation ((See Exci.) Distance from septic of Application for: X Estimated: Wall Depti Casing Mail Septil cable: Propose Graviting Internal Telescope Casing St. Steel / Galvarized Mathod of Construction X Auger Indicate total No. of with this wall or any other	rystom N/A t. Descri rystom N/A t. Descri rystom N/A t. Descri New Construction 1011* ft Idential: Bik-Steel / Gal / PVC xv Idential: Idential idential Idential: Clips (specify:) Id	(bee Bee piton of facility Jan. was piton of fac	Abandonin Abandonin 20 stilica sational diam (bentonite) combination on the 0 oue property (Liet Ciher Creen intervente Screen intervente interven	of construction date 2/1 of Abandon Health all from 90 to 100 and see before whelled with a ene-feet runing to the location and indicate wall a marker, provide distances before	9/08 Part State Of The County of the With and Incidential Control of the West and Incidential County of the West
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		Approval Granted By:	APIND POW	**************************************	62	sue Date; 7-19	- Cipalulus	108184
	:	Owner Number: THIS PERMIT NOT V WELL SITE DURING	VALID UNTIL PROPERLY SIGN ALL DRILLING OPERATIONS	Fee Received: SED BY AN AUTHORIZE	Enter num	isical month, day an	of the wmd. It shall i	// <u>IP </u>
		Form 0123 Re	ev. 4/95	·.		•	_ FEMALE	L. EDV.

			STATE OF FLORIDARIEPAIR, MCIDIFY, Company of the second of	OR ABANDON A WI THIS FORM MUST IN The Water will community form and forwarding county where applied	ELL SEMILED OUT Condor is responsible permit to the a library to the a li	OMPLETELY. a for complaing this	Permit No. 19-15 G Florida Unique I.D. Permit Stipulations Requi 82-524 well SV/2 Application No.	ired (See attached)
-	•	Florida Power an	nd Light Company,	Attn; Mr. Ed Paula	9700 SW	344 Street Flori	da City 33034	305-246-6407
Í	•••	Owner, Legal Name of E	ntity it Corporation	A	ddress	City .	Zip	Telephone Number
			clear Generating Sta		of proposed	wells attached		
_		Well Location — Addres	s, Road Name or Number, C	Ny F	Printer TOT #	11025	404 000 40	£1
Ě	3.	Well Drilling Contractor	ecring and Consulting	ng, me Philip K., Licensi	PIUS FL#	11,022	404-873-47 Telephone No.	
		. 396 Plasters Ave	MANUEL .			NW NW		X NE
		Address	1106			(amaliani) (biggest)	1/4 of Section 34	· ┝┈~├~~├~~┣ ~ ┥┃
ŝ		Atlanta	Georgia	30324	•		(Indicate Well on Cha	¹¹⁾
	i	City	Stine	Zip	5.	Township 57S	Hange 40E	• []
E S		Miami-Dade	, N/A		, N/A	N/A.	, N/A	
2.5	υ,	County	Subdiv	Ision Name	Lot	Block	Unit	SW SE
	7.	Number of proposed t	wello 1 Chuck the u	t és of Wall: (See back of permi	for additional choice	n Domes	etic Monitor (type) Ob	servation well
I			(type) Public (Neter Su			List Other:		
	•	Allen Donahl	·	· Mara Ba	ek)	•		9/08
		Distance from septic :	system N/A tt. Des	ecription of facility Ind. was	(eviter distants are	Estimated start o	if Construction data	778.2
	8.	Application for: X	New Construction	Repair/Modily	Abandonne	nt(Assam lo	ir Abandonineni)	opperatus
İ	9.	Estimated: Well Depti Casing Ma	26* ft Normal: Ella-Steel/Gal/FVC	Casing Depth 15 ft rvcCasing Diameter 2"		Screen Intervi	al from 15 to 25 see below	nit do 1979 a 70 Com
	10.	lf applicable: Propose Grouting Intervi	From 13 to 25 From 0 to 1	Seal Material 10 Seal Material Em Seal Material Por	/20 silien sand malts tland/hentantic s	*Well will be in	stalled with a one-feet sumb	nit no. 17. Dade Country Miamir Dade Country Miam
	11.	Telescope Casing	or Liner _x(chécic o	na) Diameter 2"			North	
			/ PVC PVC Other (opecity:			OW-6	21U 🏗	
	12	Maliand of Canabaroti	on: X. Rolary	Cable Tool	Combination		N	
			Other (spircly:)]		
-		Indicate total No. of w	refls on sits $\frac{0}{}$. Lis	t number of unused wells	s on eite <u>0</u>	N.	45 - 15 - 3 30 a a francis	aposed well locations
	14.	in this wall or any oth	er well or water withdrawa	li on the dwner's contigu	ous property co	rvered >	referred by started for he	
		under a Consumptive	Mateir Line Permit (CUP/W	/UP) or CUPA/U P Applic	etion? X_N¢	Yen		
		(If yes, complete the to		N/A		-		
		District was I.D. No. 1	1/A.	J/A		ì		
	ĺ	Latitude N/A	Longitude 1	VA.			South	
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			टाव वृत	T WRITE BELOW THE	SIME -10	FOSFIGIAL USE C	DILLA	
	•	Approval Granted By:	ASTELD EW.	ARDS	1884	to Date:	<u>~ S</u> Hydrolog	lat Approval
		Owner Number;	•	Fee Received:	s_60	Receipt No. 10 8	6215426 Check N	F 4 3 4 F 7 11
		THIS PERMIT NOT V	VALID UNTIL PROPERLY SI	GNED BY AN AUTHORIZE	Enter nume DOFFICER OF	ricel month, day and	d fidi, four-digit year. OF THE WMD, IT SHALL I	
		Form 0123 Re						d.gnv

ſ			RIEPAIR, MOD Southwest Northwest St. Johns R South Florid Suwanness CHECK BOX FOR APIR	iver The water form and to lea county when county when parameters aborroom and the county when the county will be county when the county when	N A WELL MUST BE FILLE WALI contractor is re Whiteing the porm ora applicable. CN BACK OF PERMI	D OUT CON seponsible t il to the app T FORM.	APLETELY. For completing this propriate delegated	Florida Unio Pennit Stipu 62-524 well Sulf Applic Autor	ue I.D	d (See sitached)
	Ι, ,			any, Attn: Mr. Ed		0 SW 34		a City		305-246-6407
		Owner, Legal Name of E		no Ctation	Address	nostal .	City		Zip	Telephone Number
	Ż, į	Neil Location — Address	clear Generalli a. Road Name or Au	ng Station - coord	mates of pro	hosed A	Yens attached			
				isulting, Inc Phi	llip K. Pitts	FL#1	1035	40	4-873-476:	
횔		Mell Drilling Contractor			License No.			Tele	phone No.	MAL NE
ě	_	396 Plasters Ave	nue			4	SE 1/4 of SE (Dipper)	1/4 of Sectio	34	
Shie langh enverge window		Address				(B	mules) (ziggait)	(Indicate !	Well on Charl)	
3	-	Atlanta	Georgia	30324		5. To	ownship 57S	•		
윤		dity	State	Zip			•			
ğ	ο.	Miami-Dade	N/A	A. 6 (C.)	N/A	Lol	N/A.	N/A	ala	Sw SE
╬		County	<u> </u>	Subdivision Name	·			Uı		
1	7.	Number of proposed y	relie 1 Char	k the use of wall: (See b	scic of permits for additio	mai choicea)	Domest	ic Monito	(type) Ohse	ryation well
+	8.	Application for X	New Construction	ater Supply (type)	y Ind. wanternter die		List Other	construction	n date 2/19	Outo Starre
	۵.	Estimated: Well Depti	101* ft	Casing Dept	90 ft		Streen Interval	from ⁹⁰	100	Pya/a
		Casing Ma	terial: Bik-Steel / Ga	I/PVC rvcCasing Diam	eter 2"		Seal Material 3	se helow		10. VIV. Q C COME
		If applicable; Propose Grouting Interva	From 0	to <u>93</u> Seal Mat	erial <u>Bentanite</u> Orial <u>Partisod/bo</u>		*Well will be instructed **Draw a map of we reads and landing	ailed with a one of location and like; provide di	Date:	Date Samuel O 2 O 2 O 2 O 2 O 2 O 2 O 2 O
				hack one) Diameter 2'			_ OW-63	6L	P(ORT)	
	12.	Method of Construction X Auger		Cable Tool		ilnation ·				
	13.	Indicate total No. of w		List number of unu		0	· ·	-		
- 1				ndrawal on the owner's			ered 学 sec aft	ached draw	inga for prop	osed well incations
	,			(:UP/WUP) or CUP/WU			Уев			• .
Į		(If yes, complete the fo		JPNo N/A	- 1-1		- · ·			
- 1		District well I.D. No. 1						1		
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İ				ONOT WHILE BUT	NO THIS LIMI		OFFICIAL USE OF			
		Approval Granted By:	ASTER L	<u> XUAPRS</u>		IBBUO	Date:	-278	_ Hydrologist	Approval
		Owner Number;			Ent	6 numeri	cal month, day and	full, four-dia	^ Check No.; It vear.	
		THIS PERMIT NOT V WELL SITE DURING	alid until prope All drilling ope	RLY-SIGNED BY AN AU Pations. <i>This perm</i>	THORIZED OFFI	CER OR F	REPRESENTATIVE OF	fthe WMD	IT SHALL BE	AVAILABLE AT THE
		Form 0123 Re	v. 4/95					ت.	£ symmet	- T- C-

ı	(STATE OF FLORIDA I REPAIR, MODIFY, OR Southwest Northwest St. Johns River South Fords Suwannee River CHECK SOX FOR APRIOPRIATE DIS	ABANDON A WE THIS FORM MUST IN The water wall contra form and to warding is county where applical	EFILLED OUT CON ctur le responsible t he permit to the app ide.	IPLETELY. or complating this	Permit No	Ulred (Set attached)
1	1_		nd Light Company, Att			4 Street Florid	la City 33034	305-246-6407
Ī	••	Owner, Legal Name of E			ldress	City .	Zip	Telephane Number
ł	2.		iclear Generating Stati		of proposed v	vells attached	······································	
	_	MACTEC Engir	is, Hose Name or Nilither, City neering and Consulting	. Inc Phillip K.	Pitts FL # 1	1035	404-873-4	761
8	3.	Well Drilling Contractor	,	License	No.		Telephone No.	
Š		396 Plasters Ave	:nue		4 <u>\$</u>	E 1/4 of SE (Opposi)	1/4 of Section 34	_
E		Address	•				44	art)
ş	i	Atlanta Civ	Georgia Stars	30324	5. To	ownship 57S	Range 48E	· ├────────────────────────────────────
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, S		Miami-Dade	Sundivinic	n Name	Lot	N/A Blook	Unit	SW SE
ĺ	7.		wells 1 Check the use					SELARIOR MEII
		Distance from septic:	itype) Public Water Suppl system N/A P: Descri	ption of facility Tid. WAR	enater discharge area			19/08
1	8.	Application for X	New Construction	Repair/Motify	Abandonment			Date Command
	9.	Estimated: Well Dept	, 26" ft	Casing Depth 15 ft		(Asason for Screen Interval	Abandonment)	PROGO OF
	10.	If applicable: Propose	aterial: Bik-Steel/Gel/PVC rv. al From 13 to 25 al From 0 to 13 From 0 to 10	Seal Material 10/	20 silica sand	"IVell will be insti	ed led with a one-foot support	Date water The Mentity known well and landmarks.
	11.	Telescope Casing Blk-Steel / Galverized	or Liner x (drack one) / PVGPVC Other (specify;	Diameter 2"				
	12.		RotaryOther (specify:)				*	
	13.		veils on site 0 . List m			.		n
	٠.		ter well ar water with irewal or			ned see att	ached drawings for p	ropused well locations
	,	-	■Water Use Parmit (GUP/WUP			B		
		(If yes, complete the id	ollowing) CUP/WU:2 No. No.					
		District well I.D. No. 1	<u>√/A</u>			1	•	
		Latitude N/A	Longitude N/A				South	,
		Data obtained from Gr	· · · · · · · · · · · · · · · · · · ·	· · ·)		
	15	I hereby pertify that I will som and that a weder use permit of pricy to commendament of we application is attention to go perferments. It applicable, I after definition in signature of Signature of Committee	ply with the application rules of 1864 (0, File artificial manage permit. If rustice, has all companion. I butter or party into all infor- nce trafficials in researcy approved from or game to broy (o) a well compare on report of leading all to prefer pooling from the prefer pooling the prefer pooling from the prefer pooling from the prefer pooling from the prefer pooling the prefer poolin	which Administrative Code, been or will be observed makers provided on the her federal, state, or local or the District within 30 days License No.) carthy that I am II responsibilities un the agent for the o sponsibilities as at		I the information provided is accommon to the common or properly bits information and their light to personnel orders with the common or a few of the common	uraba, and that I am aware of lay proton that well on I carrier that I am a variety th
				MRITE BELOW THIS	LINE FOR	OFFICIAL OSE DE		
		Approval Granted By:	ABTEND BOWA	istas	19810	Dare: 2-19-	Hydrolo	IsvorqqA talg
		Owner Number:		Fee Received: \$		Hecelpt No. 18	021546 Check N	Laur mil
		THIS PERMIT NOT V WELL SITE DURING	/ALID UNTIL PROPERLY SIGN ALL DRILLING OPERATIONS	ED BY AN AUTHORIZE This permit is vai	D OFFICER OR F	cal month, day and IEPRESENTATIVE Of Informicate of las	fthe who. It shall	BE AVAILABLE AT THE
		Form 0123 Re	av. 4/95	•		,	TE SAFETY	SL-3259

FAX: 305-876-1799

TO: TOM MU DANIEL
FOLIO#: 30-7034-004-0010

			STATE OF FLORIDA PERMIT APPLICATION TO CONSTRUCT,	Permit No. 191941147
			[] On (Photom)	Fiorida Unique I.D.
	, I		Morthwest: This furth must be filled out completely.	Peimii Stipulations Required (Set attached)
	1	CHEST SEE	The water well continuous to responsible for completing tiple form and forwarding the permit to the appropriate delegated	
			Children and state	52-524 well SAP Application No.
		Series Series	CHECK BOX FOR APPROPRIATE DISTRICT, ADDRESS ON BACK OF PERMIT FORM.	AND STORY OF A COLD TO THE DESCRIPTION OF STREET
		w -1 -3	Attu Ed. Paula	
	1.	Florida Pau	ucr+Light Co. 9700 SW344 St Florida City 3	3034 305 246 6407
		Owner, Legal Name of I	Entity & Corporation Address City	Zip Telephone Number
	2.	Jurkey/ oint	Nuclear Generality Station 9760 SW 3414, Street F	lerida City FL 33035
			is, Road Name or Humbar, City	- 11-11 6-2 11751
, 55 s	3.	Well Drilling Contractor	expecting a Consulting Inc-Philip Pitts FL# 11030	
2 E	•		'A	
25		396 Plast	CF AVE 4, NE 14 of SE 1	
200		Atlanta	GA 30324 6. Township 57.5	(Indicate Well on Chart)
25		City	Sizia Zip E. Township 57 S	Range 40 E
125	_	Ni- Och	N/A silala	N/4
¥.5	₽.	County	Subdivision Name Lat Block	Unii Sw SE
	-			1 (11/11)
	7.	Number of proposed	Wells Chack the use of Well: (See bash of permit for additional cholose) Domestic	Manker (type) Observation WEII
	,	(Bee Bast)	(type) Public Water Supply (type) List Other	TWO TO THE PARTY OF THE PARTY O
			system VIA to Deportption of facility Retirected start of a	construction data
		·		Day 6 4 4
	ļ.		New Construction Repair/Modify Abandonment [Research for Al	
	9.	Estimated: Well Dept	n 130' + 1' Sump Casing Depth 120' Screen Interval	180
			etarial; Blk-Steel / Gal / PVC Casing Diameter 2 Seel Material 3	
	45	if applicable: Proposi	and From 120 to 131 Sees Material 10/20 S. lica Sand	William I am I
	147	Grouting Interv		E RIMIT
		• • • • • • • • • • • • • • • • • • •	From 0 to 117 Seel Material Portand Benton to Drawe map of well	location and jedicals well site with an "X", Identity known
	11.	Telescope Caajob		
		Bilt-Steel / Galvenized	11. AL-1/17.AL	<i>b</i>) 🐟
	4.	BRANCAS AS CO. mahr. and	ion: X Rotary Cable Tool Combination	
	12			
	١	Auger	Other (upacity:)	•
	18.	indicate idial No. of w	relia on alta <u>20</u> . List number of unused wells on site	g .
	14.	-	ier well or water inithdrawal on the owner's contliguous property covered	, <u>P</u>
	1	under a Consumptive	Miniter Use Permit (CUPMUP) or CUPMUP Application? XNoYes	
	ŀ	(If yes, complete the fo	- 1-y	
		District well I.D. No.	# /A	
	ł	Latitude//	Longhude NA	
		Data obtained from GF		Saun
	15.	. I hereby carrily than I wincom	by with the explosible to use of Tile 4th, Frontis Administrates Code. I cently that I am the opened of the property, that the	क रिकारक्षिका हरकर्गकेर्य के क्यांग्यक, बार्व में बंग प्रमाणकर विशाप
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	1	ADVENTION LIGHT LANGE AND	curricults accurage permit. Il nonciati that been of will be challed in the challed in the second of	
	1	JAK L	1/035	0/20/08
		Elegrature of Conventor		briggers Signature Days
			DO NOT WENT, HILLOW THIS LINE — FOR DEFICIAL USE ONE	nQ
		Approval Granted By:	Bane Ulini: 17 7	LikelonoStat Wobsokies
		Owner Number:		26438 Check No.:
		THIS PERMIT NOT V	Enter numerical month, day and fu ALID UNTIL PROPERLY SIGNED BY AN AUTHORIZED OFFICER OR REPRESENTATIVE OF	HI, 19UI-1991 YOUR. THE WMD. IT SHALL BE AVAILABLEAT THE
			ALL DRILLING OPERATIONS. This permit is valid for 90 days from date of Issu	
		Form 0123 Rs	ny. 4/95	
				The state of the s
•		13-410	-34019 -101520430	•

				-								
				LORIDA PERMIT		N TO C	ONSTR	ruct,	Permit No.	14,59	- 7	248
	,			DIFY, OR ABANI	OON A WELL					ue 1.D.		
			Southwea		orm Nuste e fill	ED OUT C	CMPLETE	LY.		lettors Require		ined)
			☐ Northwea ☐ St Johns	Bluer Them	Her well contractor la	responsib	to for comp	lating this			1	· ·
			South Fig	레이스 네이트	to localisting the per				62-524 well			
		TO THE TEN	☐ Suwanne	a River	where applicable.				SUP Applic	alton No		
1			CHECK BOX FOR AF	PROPRIATE DISTRICT. ADDR	ESS ON BACK OF PERA	AIT FORM,			4000	Charles P. Con	oranga asa	3J.15
		Florida Power at	nd Light Com	pany, Attn: Mr.	Ed Paula 970	00 SW	344 Str	ect Florid	a City	33034	305-246	6-6407
	1.	Owner, Legal Name of E		<u> </u>	Address							
						-	. مالمیج ا	City .		Ζlp	respiror	ne Number
- 1	2.	Turkey Point Nu Well Location Address	Brad Manua	Ling Distibil - COD	votnures of br	vhosec	· MACIFA	rracusă	····			····
2_		MACTEC Engio	e, noab Neme or o	nunus, ogy Innsulting. Toc 1	Phillip K Ditts	a TIT.#	11035		dn	4-873-476	,	j
į	3.	Well Drilling Contractor		iniouxumg, mc ,	License No.		11000	·		ephone No.		· '
		396 Plasters Ave		•		_	NE .	STP			NY.	NE.
3		Address	uut		····	_ · 4.	(smailest)	(Diggest)	1/4 of Section	M 33	h	· <u></u>
		Atlanta		30324	r.			·	(Indicate	Well on Chart)		
		Chy	Georgia State	Zip		– 5 .	Townshi	57S	Hange	40E		X
		•		—r		<u>. </u>		. — 	374		}	
3	.6.	Miami-Dade	N/A			<u> </u>	N	/A. Block	N/A			لللل
-45		County		Subdivision Name		Lot		Block	U	nlt	8W	SE
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Į		(344 Back) Distance from septic a	N/A	ft. Description of fa	relitive Ind. waterwater to	lecharge an	Eatin	naturi alart of	constructio	n date 2/19	/08	
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Ì	4.	Application for: X New Construction Repair/Modity Abandonment (Reason for Estimated: Well Depth 101* ft Casing Depth 90 ft Screen Interv. Casing Material: Bik-Steel / Gal / PVC evo Casing Diameter 2" Seal Material If applicable: Proposed From 88 to 100 Seal Material 10/20 stilics sand "Well will be to Grouting interval From 83 to 85 Seal Material Beatonite Prom 8 Seal Material Portland/Deptonite sturry Prair e may of a 100 Seal Material Portland/Deptonite						(Resear for)	hendonmani	 -	Date E	
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١.	Florida Power a	nd Light Com,	pany, Atin	: Mr. Ed Paul	9700 SW	V 344 Stre	et Floric	la City	33034	305-246-6407
1.	Owner, Legal Name of		·		ddress		City .		Zio	Telephone Number
,	Turkey Point Ni					ed wells at			_ r	, , (,
_	Wall Location - Address	Road Name or I	lumber City	· · · · · · · · · · · · · · · · · · ·			·	····		· · · · · · · · · · · · · · · · · · ·
3.	MACTEC Engir	teering and Co	msulting, l	lnc Phillip K	. Pitts FL	# 11035		40	04-873-4761	l
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В.	Distance from septic Application for: X	· ·					-4-4 -4-2-1	******		
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Form 0123 Rev. 4/95

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wner Number:		Ent	er numerical month, day a	nd full, four-digit	year.

THIS PERMIT NOT VALID UNTIL PROPERLY SIGNED BY AN AUTHORIZED OFFICER OR REPRESENTATIVE OF THE WMD. IT SHALL BE AVAILABLE AT THE WELL SITE DURING ALL DRILLING OPERATIONS. This permit is valid for 90 days from date of issue.

1/120

Form 0123 Rev. 4/95

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		Florida Power ar	nd Light Comp	any, Attn: Mr. Ed Pa	nia 9700 SV	V 344 Street Flori	ida City 33034	305-246-6407
	1.	Owner, Legal Name of E	Entity if Corporation		Address	City	Zip	Telephone Number
,	2.	Well Location - Addres	s, Road Name of No				404-873-47	
8	3.	Well Drilling Contractor	teering and Co	nsulting, Inc Phillip	Cense No.	# 11035	Telephone No.	
		396 Plasters Ave				SE NE	• •	NE NE
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				Repair/Modify				
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	9.	Estimated: Well Depti	, 26* ft	Casing Depth 1	15 ft	Screen Interv	ral from 15 to 25	V (1) (1) (1)
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Form 0123 Rev. 4/95

	-		CONSTRUCT,	Permit No. 10-59-7757 Florida Unique I.D.					
	(Southwest Northwest St. Johns Riv	er The water well o	/4782 MLLED OUT	ble for completing this	Permit Stipulations		
		11	South Florida Suwannie Ri	. Attente when 'n		Delagais dalagated	62-524 Well	1-	
		(N) 1 1 1 1 1 1 1 1 1 1		RIATE DISTRICT, ADDRESS ON E	DACK DE PERMIT PORM.		Application N	NO,	
	1.	Florida Power m	nd Light Compar	ıy, Attu: Mr. Ed Pa	ula 9700 SW	344 Street Flori			5-246-6407
	"	Owner, Legal Name of E	nity if Corporation		Address	City		Zip 7e	iephone Number
	2.			Station - coordina	tes of propose	d wells attached		•	•
_		Well Location - Addres	s, Fload Name or Numb	er, City					
8 8	3.	MACTEC Engin	leering and Cons	ulting, Inc Phillip	K. Pitts FL	‡ 1 <u>,1035</u>	404-87		
# 15 P		Well Drilling Contractor 396 Plasters Avenue 4 SW 1/4 of SE Address Address							NIC NE
Į.		Address	MAC		4.	(Finalist) (Signate)	. 1/4 of Section 33	-	┿╍╇╌╄╍┥╿
9		Atlanta	Georgia	30234			(Indicate Well or	n Chart)	<u> </u>
	i	City	Slate	Zio	 6.	Township 575	Hange 40E		
4		Miami-Dade	N/A		. N/A	. N/A.	, N/A	<u> </u>	*X
2.5	6.	County		ibdivision Name	Lol	Block	Unit	<u> </u>	SW SE
	-						·····	Observat	
١				the line of Well: (See back of					
ı		Imgellon (type) Public Wate	er Supply (type)	- March	Liet Other			
Į		Distance from septic :	nyatom N/A t.	Description of facility In	क राज्यात् वे. सम्बद्धानाच्य विविधिकाहरः स	Estimated start of	construction date	2/19/08	
		Intigation (type) Public Water Supply (type) Liet Other (See Back) (See Back) (See Back) Distance from septic system N/A It. Description of facility Tell							
1	۵	Estimated: Well Conti	101* ft	Casing Depth 9	0 ft	(Meason to	Abendonment) If from 90 to 100	1	O
	Ø1	Casing Ma	terial; Bik-Steel/Gal/	PVC rvcCasing Diameter	2"	Seal Material		-66 k	minte
	10.	if applicable: Propose	ed From 88- 4	o 100 Seal Material	10/20 silica sar	ığ "Wan win bu ins	see below saling with a ane-took rel Ps of location and indicate arise, provide distances Non	mp it 500.	Dade Count
		Grouting Intervi	d From 83	Seal Material Seal Material Seal Material	Bentonita		19 7	281 2/193	Dis Delegation
		_		Seal Material		noads and lando	en lacemon ena maiose erics; provide distances	personal tree	Mid landmarke.
	11,	Talescope Casing	cr Liner(the	ck one) Diameter 2"			Nor	Eth No.	
				сту:		OW- 73	35L 7		
	12.	Method of Construction	on: X Rotary	Cable Tool	Combination	.		ι .	
		X_Auger	Other (apacil	yr)	_)				
	13.	Indicate total No. of w	wite on site $\frac{0}{2}$.	List number of unused v	wells on alto <u>0</u>	_			
	14.	is this well or any oth	or well or water withdo	rawal on the owner's con	liguous property o	coverect 🕏 sec at	tached drawings fo	or proposed	well locations (
	ł	under a Consumptive	Avaior Use Permit (CL	IP/WUP) or CUP/WUP Ap	plication? XNo	Yee		•	•
		(If yes, complete the fo	Bowing) CUPMUP	No. IVA		_ 1			
		District wall I.D. No. No.					•		
		Latitude N/A	Longites	ie <u>N/A</u>					
		Data obtained from GP	¹Sormapo	r survey (musp determ	NAD 27 NAD 8	B)	Sou	ift.	····
	15.	i hereby certify that) will control and think a waller use peomit of	ly with the applicable rules of T artificial recharge permit. If no	Title 40. Florida Administrative Code, aded, Inna been or sell be obtained as all information provided on the information provided on the information rejection, acts, or local capacit to the District within 50 day.	Country Tree 1:	am the owner of the property, its sunder Chapter 573, Pickfol, St the owner, that the Information a as entired above. Owner consent	al the information provided in Nation, to maintain or proper	e scourais, and the state of th	hat I are exists of by well; or, I certify that I sin I the person of his re-
	1	application is accurate and the	NA May County of a May county in NA May County of a May county in	ac an morniant provided by the al from other tederal, state, or local ac record in the District within 50 dec	l spone billions :	ER STATES ABOVE. Chyner commen	DANSON OF THE PROPERTY	or a reaction of the	HE SCHOOL TO THE WER AND.
	1	BIDE CHEMINATE DAME OF	intion, interpolations the	1/120		l	1 (1 <i>//</i> // (なした	alielas
		Signature of Contractor		License No.	_ ·	Own	era or Aquant's Signature		- 4 170
			on	NOT WRITE BELOW	HIS LINE - FC				
		Approval Granted By:	AGIENT E	DWARIOS	lat	sue Date:	TON Hyd	irologist Appr	
		Owner Number:			10272744 CM		24534		
				Y SIGNED BY AN AUTHO	RIZED OFFICER O	erical month, day and R REPRESENTATIVE C	af the wind. It sh	r. Iall be avai	LABLEAT THE
				TIONS. This permit is					
		Form 0123 Re	v. 4/95						

ī	. (STATE OF FLORIDA PERMIT APPLICATION TO CONSTRUCT, REPAIR, MODIFY, OR ABANDON A WELL I Southwest I Northwest ITHIS FORM MUST BE FILLED OUT COMPLETELY. THIS FORM MUST BE FILLED OUT COMPLETELY. TH					this pared 6	Permit No: 10/69/795 Florida Unique LD. Permit Stipulations Required (See attached) 62-524 wes SUP Application No. ALOVE SIGNED STIPULATION SERVICES da City 33034 305-246-6407		
	,	Florida Power at	ad Light Com	pany, Attn: Mi	r. Ed Paula	9700 SW	344 Street	Florida (City 33	034 30	15-246-6407
]	1,	Owner, Legal Name of E	Entiry if Corporation		Addi		C	ity .	·	ZIp 7	elephone Number
	2,	Turkey Point Nu	clear General	ing Station - c	oordinates of	proposed	wells attac	ched		·w.	
, l		Well Location — Address MACTEC Engin			- Phillip K. P	itts FL#	11035		404-87	3-4761	
8	Ů.	Well Drilling Contractor		,	License N	0,			Telephone	No.	NW NE
۾ ۾		396 Plasters Ave	nue		·	4.	SW 1/4 of	SE 1/4	of Section $\frac{33}{}$		
		Address		•		· -	(Armilenna)	placent	(Indicate Well of	Chart)	
ξŞ		Atlanta	Georgia State	303; Zip	24	'5.	Township 5	7S	Range 40E		
				ZIP			• *		-		X
7 E	ο.	Miami-Dade		Subdivision Name		N/A	N/A.	onk r	V/A	L	SW SE
-		County				LOX					
ļ	7.	Number of proposed s				•					
		(See Back) Distance from septic a	type) Public	Water Supply (type)			List Other_		· · · · · · · · · · · · · · · · · · ·		
- 1		(See Back) Distance from sentic a	avatem N/A	ft. Description of	(See Back) Incliky Ind. materi	ter Cischargo nec	Estimated	aturt of co	nstruction date	2/19/08	3
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	ł							leason for Aba		_	WE.
	9,	Estimated: Well Depti	_h 26* ft	Casing	Depth 15 ft		Scree	of isvietni n	m 15 to 25	- 00	RUain
		Casing Ma	iteriai: Bik-Steel/G	ai / PVC rvc Casing	Diameter 2"	······································	Seal N	Material sec 1	clow		ROVE TO
	10.	if applicable: Propose Grouting Intern	nd From 10	to 25 Se to 13 Se to 10 Se	a Majerial Bentoni	46	urry Draws	will be installed mup of well to	with a one-feet sui cation and indicate	Men auto M	Proposed Control of the Person
	71.	Telescope Casing					TOROS S	rio innortalità)	Nor	th	THE REPORTS
		8fk-Steel / Galvanized				···		W-735	-	•	•
	,,	Method of Constructi	ion. X Deies	er Catile	Tool (ombination :	. 1			l	
	1-	X Auger		pectfy:)		MAI AN MIGHT	Ī				
	.,	Indicate taini No. of w				nates 0	· .		-		
							1	sec attach	ed drawings f	ог ргорозе	d well locations
	14.	is this well or any oth				97	bened			•	
		under a Consumptive		MUPNO. N/A	PAWUP APOIICAG	M7NO _	T@6 [
	1	(II yes, complete the for District well I.D. No		WUP NO. A SEA		····	-				
		Latitude N/A	Lor	gliude N/A			1				
		Data obtained from GF			may datum NAD 2?	NAD 8:	ـــا رـــه		Bor	<u>rth</u>	
	15	(hereby cuttly that I will come and that a writer use permit of my application is application and the common a	ply with the applicable rule of artificial michange partial, is occasionation. I have to all hards obtain the small pu- licione to provide a well are species. It is provided a well are species.	se of Title 40, Florida Admir il reeded, fine been or wi nifty that all information pro approved from other tederal addition report to the Distri- tical	niebzityo Code, il berobelned wided on the stane, or local ot within 30 days	i omitly that i as responsibilities the agent for th apone billies as	m the owner of the p ender Chapter 373 to owner, that the in a count above, Own	property, that the Fronties Supposes formation privide ner colleges to p	Information provided, to maintain or proper diseasement and the transfer and transfer and t	e pouree, and the abandon the truck internal to the control of the control of a page to the cont	that are evenue of my position, to the top the transition of the transition accepts to the well attended to the well-attended to the we
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		Elgrigate of Contractor	سند الم	HOT WELLS	FRA BULOW THIS U	INE FO	E OFFICIAL		r Aparka Signatura		
		Approval Granted By:	DESTERIO	EDVAROS	*		ve Date:			irolo gi st Ap	
				<u> </u>	Can Canada at 51	50		.T0802	,	sck No.: 5	24534
		Owner Number:		.,	Fee Received: \$ _	Enter num	Receipt No arical month,	day and full	. four-digit yea	r.	AN ABI E APPLIE
		THIS PERMIT NOT V	FALID UNTIL PROF	PERLY SIGNED BY A PERVITIONS, This	NY AUTHORIZED <i>pormit i</i> e v <i>eli</i> c	OFFICER OF I for 98 de	r Represent ya from dat	TATIVE OF T te of legue	newmo.iteh ',	iall be av	MEADLE AL IME
		Form 0128 Re									

,			REPAIR, MODIF Southwest Northwest St. Johns Fliv South Florida Suwennee Ri	Er The weser well form and forward	WELL THE PLLED OL contractor is responding the permit to to possible.	T COMPLETELY. althe for completing this te appropriate delegated	Florida Unique I.I. Permit Stipulation 62-524 well GUP Application	No.
		Florida Power at	id Light Compar	ıy, Attn: Mr. Ed P:	aula 9700 S'	N 344 Street Flor	ida City 3	3034 305-246-6407
į	٦.,	Owner, Legal Name of E			Address	City		Zip Telephone Number
ı				g Station - coordina	tes of propos			
- (Well Location - Address						
製業	9.	MACTEC Engin	eering and Cons	ulting, Inc Philli	p K. Pitts FI	# 11035	404-8	73-4761
랋	1	Well Onling Contractor		L	lcense No.		Telepho	ne No. NW NE
죑	_	396 Plasters Ave	nue	-		4. NE 1/4 of NE	_ 1/4 of Section <u>3</u> /	<u> </u>
38	1	Address				(very) (p)28s	xi) {Indicate Well:	on Chart)
	_		Georgia	30324		5. Township 57S		
		Hty	State	Zip		•		
30	6	Miami-Dade	N/A		, N/A	N/A.	N/A	
Z.	" (County	Si	ubdivision Name	Lot	Block	Unit	Sw SE
1	7.	Number of proposed t	velis ^{II} Cherik	the use of wall: (9 so back o	i permit for additional of	olcumDom	eetic Monitor (typ	e) Observation well
	8. 6. 10. 11. 12.	Application for: X Estimated: Well Depticating Ma If applicable: Propose Grouling Interview Grouling Interview Grouling Interview Glavanized Mathod of Construction Auger Indicate total No. of wills this well or any oth	New Construction 101 * ft terial: Bik-Steel / Gal / d From 88 if From 0 From 0 or Liner x (clu / PVC PVC Other (specials on site 0 or water well or water with: // Water Use Permit (C	PVC PVC Casing Depth Casing Depth PVC PVC Casing Diameter to 100 Seal Materia to 85 Seal Materia to 85 Seal Materia to 85 Seal Materia to 83 Seal Materia to Rock and Diameter 2" Cable Tool this number of unused trawal on the owner's co-	Abandon Of ft (2" 10/20 stiles s Bestants Perdand/bentoni Combinati wells on site 0 ntiguous propert	Reason Sorgen Inter Seal Materia and Testury Draw a map of roads and lane OW-S	tor Abandonment) val from 98 to 1.0 ii) ace below iii) ace below i	Dansards T. 1990 Date T. 1990 Date National Date National Date Date Date Date Date Date Date Date
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							8	puth:
		Data obtained from GF	.a ot useb (r survey (map datur		083) L		
	15.	I hereby cardly that I will come and that a water use partiel of private partiel of the private and that a water use partiel of the application is accurate and the application is accurate and the application is according to the application of the application o	by with the applicable rules of a street income of a street income permit. If no a constitution, farther permit is not constituted in the constitution, in the constitution of the constitution of the constitution of the constitution, which was constituted as well complete factor, which gives constitution,	Tible 40, Florida Administrativo Codi Reder, Ima been or will be obtained star all information provided on a val from other federial, state, or loc xxx resport to tiple Demote within 50 of Locanae Mo.	e, I certify the inspured in a special approximation appro	I()	that the information provide Stipchies, to maintain or pro- portified in exception, and logs to performing to the Will whether or figure a Signature	d is naturally and shall has sense of the same of the
			00	The state of the s	THIS LITTE	OB OBJUGAL USE	ONEV	
		Approval Granted By:	10-10-		THIS LINE		ONEV	ydrologist Approval
		Approval Granted By:	10-10-		wed: 8: 50	IOB OFFICIAL USE	108 H	heck No.: 52 4534

- Styrad gov.

Form 0123 Rev. 4/95

1	(REPAIR, MODIS Southwest: Northwest: St. Johns Riv South Florids Suwannee Riv CHECK BOX FOR APPROP	form and forwarding county where applic VO; THATE DISTRICT, ADDRESS ON BACK	FELL. 88 PILLED OUT (rector is responsit) the permit to the spots. OF PERMIT FORM.	COMPLETELY. ble for completing this appropriate delagated	ua LD	of (See attached)	
- [1.			ny, Attn: Mr. Ed Paul		344 Street Flo	rida City	33034	305-246-6407
ı						City .		Zip	Telephone Number
١	2.			Station - coordinates	of propose	d wells attached	<u> </u>		
2_		Well Location — Address		os, Ony sulting, Inc Phillip K	. Pitts KT. #	11035	40	4-873-476	1
	3.	Well Orlling Contractor			50 NO.			aphone No.	NW NE
S VISIDA BROUGH STANSON W		396 Plasters Ave	nue	1/4 of Section	Mail on Charl	X			
ğ		Atlanta City	Georgia State	30324 Zip	5 .	Township 57S	Range	40E	
				шγ	. N/A	N/A	. N/A		}
3.2	6.	Miami-Dade County	N/A	ubdivision Name	LOS	Block	IVA	nīt -	SW SE
	<u></u>								
١	7.	Number of proposed v	wells ! Check	the use of well: (See back of peri	nit for additional choic	as)Don	restic Monitor	r (type) Ousc	LANDOD MCII
١		Impation (type) Public Vital	er Bupply (type) (See E Description of famility Ind. w	hadi	List Olher		···	
Į		Distance from septic	system N/A. t;	Description of facility ind. w	Mariemeter distributur Antemater distributur	Estimated star	t of construction	n date 2/19	/08
	8.			Repair/Modify		ant	for Abendonment)		Date Stamp
	9.	Estimated: Well Depti Casing Ma	1 26 th ft Iterial: Elk-Steel/Gai/	Casing Depth 15 1 PVC rvcCasing Diameter 2	ît .	Screen (nte	rval from 15	to <u>25</u>	Date Stand 19
			od From 13.	to 25 Seel Material 10 to 13 Seel Material Bo to 10 Seel Material Pr)/20 silica sax	tt] *Wall will be	installed with a one	Call Menne 1805	e wittning in Rismitly known a west and tenomera.
	11,	• • •		eck one) Diameter 2" scify:				North	
	12.	Mathod of Constructi	on: X Rotary	Cable Tool	Combination			M	
1		X Auger		ly:))		·			
į	l		etis on sits.	i.list number of unused well inwai on the cemen's config	le on alte <u>0</u>	B see	attached draw	ings for pro	posed well incations
	1			UP/WVP) or CUP/WUP Appli		Yes			• .
		(If yes, complete the fo		No. N/A					Į
		District well I.D. No. 1	V/A			_	•		ì
		Latituda N/A	Longitu	de N/A		1			·
		Date obtained from GF	78 or map 0	ix survey (mep detum NA	D27 NAD	18) 		South	
	15	I hereby certify that I will come and finite a water use perset of price to commencement of water and the application is the comment of the application is the comment of t	ply with the applicable rules of artificial rethings partie, it is discussed to the property of the property application of the property application of the property application of the property application of the property o	Title 4th, Florida Administrative Code, reded, nee been or will be abbailed state all information provided on the state all information provided on the return state, and from the return, state, or food is no report to the District within 30 days	i dertify final i responsibilities the agent for apone lighting	en the owner of the property dunder Chapter 373, Footof the owner, that the Introped as stated above. Camer og	that the information s Stateme, to maintain a provided is accurate puts to personnel of the	provided in account or property absence, and that I have a re 1904O or a repre	e, and that I am ewere of my no this week or, loorsty that I am somed the perser of his re- sectatives school to the well also.
	(well.	HH	1/035	•	1 1		الم ليل	13/04
	L	Bigrificant of Contractor		Ucense No.			where of Aquitte Sign	rikra	Date
		<u></u>	AGUELLE			OR OFFICIAL USI	J-053	2 de celebrata min	Annunci
		Approval Granted By:	APPIPAL E	DWARDS		sue Date:		Hydrologia -	Co C 2975
		Owner Number:		Fee Received		Receipt No.	ond full. four-dia	Check No.:	
		THIS PERMIT NOT V WELL SITE DURING	/ALID UNTIL PROPER ALL DRILLING OPER	LY SIGNED BY AN AUTHORIZ ATIONS. <i>This permit is y</i>	ED OFFICER C	R REPRESENTATIV	e of the wmp.	T SHALL BI	E AVAILABLE AT THE
		Form 0123 Re	ev. 4/95	· ·			٠	Eword	Lativ

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OUT.II.
35.

STATE OF FLORIDA PERMIT APPLICATION TO CONSTRUCT, REPAIR, MODIFY, OR ABANDON A WELL

☐ flouthwest
☐ Northwest
☐ St. Johns River
☑ South Florids
☐ Suwannee River

THIS FORM MUST BE FILLED OUT COMPLETELY.

The water well contractor is responsible for comprising this form and forwarding the permit to the appropriate delegated county where applicable.

CHECK SON FO	RAPPROPRIATE DISTRICT.	ADDRESS ON	BAČK CE ĐEĐA	ir ese
011EUN FW1 FV	INTERPRINIE MEINUI.	AWDINE DO VIII		

Permit No. 13/50 Florida Unique I.D. Permit Stipulations Required (Ses attached) 62-524 Well 🔲 CUP Application No.

	Florida Power and Light Comp	ıny, Attn: Mr. Ed Paula	9700 SW 3	344 Street Florid	n City 33034	305-246-6407
1.	Owner, Legal Name of Entity if Corporation	Ad	dress	City	Zlo	Telephone Number
١.	Turkey Point Nuclear Generation					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
2.	Well Location - Address, Road Name or Nur					
١.	MACTEC Engineering and Com		Pitts FL#1	11035	404-873-47	61 .
3.	Well Drilling Contractor	License			Telephone No.	
				NE SE	•	
	Address		. 4.	(smallest) (biggest)	1/4 of Section	
]	Atlanta Georgia	30324			(Indicate Well on Cha	ert)
	City State	Zio		Township 575	Range 40E	. X
	· ·	•	TATEL	BTC4	W77.1	
8.	Miami-Dade N/A		IN/A	N/A. Block	N/A	
	Miami-Dade N/A.	Subdivision Name	Lot	Block	Unit	8W SE
7.	Number of proposed wells 3		or articitional choices)) Domest	Monitor (type) Ob	scryation well
	· ·				•	
l	(See Bioli) Public Yil	Ster Supply (type)(Set Bed	ti .	List Other		* **
	$\frac{\text{(Noe Built)}}{\text{(See Built)}} \text{ Imagelion (type)} \qquad \text{Public Williams from septial system} \frac{N/A}{4} = \frac{4}{3}$	Description of facility fed. water	water discharge eres	Estimated at urt of	construction data $\frac{2/1}{2}$	9/08
١.	Application for X New Construction	Donnie Atomike	than denomina	•	٣	Dark Co.
1				(Reason for a	Abendonment)	20.0
B.	Estimated: Well Depth 101* ft	Casing Depth 90 ft		Screen Interval	trom 90 to 100	Provide a
-	Caeing Material: Bik-Steel / Gal	/PVC rvcCasing Diameter 2"		Beal Material S	ee below	A ALL COME
1					illed with a one-foot rappy	STAN OCOUNT
10.	Trapplicable: Proposed From 88 From 88	to Time Seat Material 10/2	onke ballie u		8	E STORY DED
1	Grouting Interval From 85	to :85 Seal Material Bento	nite		7	
	•	lo 83 Seal Maierial <u>Perti</u>	And/bontonite stu	<u>1777) </u>	fi location and Indicate Walf i rks: provide distances betwe	Silo with M. "X", identity known van well ent i landrunks.
31.	Telescope Casing or Liner (c	heak one) Diameter 2"			North	
	Blk-Steel / Galwanized / PVC/PVC Other (s:	xectfy:		OW-80	5L 🕏	
	Method of Construction: X Rotary	Oakla Wasi	O-malaballan .			
1			Compinement .			
		city:))	_			
13.	Indicate total No. of walls on sits $\frac{0}{2}$	List number of unused walls	on alte <u>0 </u>			ř.
14.	is this well or any other well or water with	drawal on the owner's continuo	IR DECIDARTY CO	warned ≸ sec atti	sched drawings for pr	oposed well locations 👸
``	under a Consumptive/Water Use Permit (-		1		•
	(If yes, complete the following) CUP/WIL		IVII:110	(44		
	District well i.D. No. N/A	F NU. A MARK				
		N/A				
	Latitude N/A Longil				.	
	Osta obtained from GP9 or map	or eurvey (map datum NAD 2	7 NAD 83_	/	South	
15,	i hereby certify that I will comply with the applicable rules of	l Trip 40, Floride Administrative Code.	I confly that I am	the commod the property, that	the Information provided is econo	no, and that I am aware of my
1	it hereby certify that I will comply with the applicable rules of and that I water use point or artificial recharge permit, it prior to commencement of wat ponethytics. I harber overthe application is account and helf but certify account and	readed, has been or will be oblighed	the pontitor the	oder Chapter 375, Florida Stab. Corter, that the information per	HER, to marking of properly span Hered in appurate, and that share	see, and talk I am sware of my con this well; or, I perlify that I am informed the owner of his he-
	prior to commissionate of win Continuetto. I suffice oursin application is accurate and strict his ordan necessary app operationate. If applicable / a great to provide a swell contain that drilling or any partial applicable, which previously accurate first	diver from other rederal, state, or recei from report to the District within 30 days	SPONSIBILITIES SE 1	agency spoker cokines comments	S DESIGNATION OF THE PARTY OF THE	DESIGNATION SECURIOR SEASONS SEASONS SECURIOR PROPERTY PR
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1	Schools of Consessor	License No.	·		AGE POWER STORMER	Day
		HEIT WHILL BULLOW THIS	THE -1 OR			
		DUMPICE	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Date: 2-19-1	0	at Approval
	•			, 17414		initials
	Owner Number:	Fee Received; \$ _	50	Receipt No.: 1080		1. 524534
	THIS PERMIT NOT VALID UNTIL PROPER	LY SIGNED BY AN ALTHORIZED	OFFICER OR	ical month, day and f	ŲI, TOU!~GIGIT YEE). 'THE WMO. IT SHALL E	HE AVAILABLE AT THE

Form 0123 Rev. 4/95

PENNON TON

WELL SITE DURING ALL DRILLING OPERATIONS. This permit is valid for 80 days from data of feature.

,	(REPAIR, M()DIF Southwest Northwest St. Johns Riv South Fichda Suwannes Riv	The water well form and form	A WELL WATER FILLED OF Contractor is reep, wding the permit to applicable.	UT COMPLETELY. melbie for completi me appropriate del	Florida Unit Permit Stip legated 62-524 we	que LD ulations Require [] cation No	2755 ad (944 attached)
				ıy, Attn: Mr. Ed P		W 344 Stree	t Florida City	33034	305-246-6407
	1.	Owner, Legal Name of I	Entity if Corporation		Address		City .	Zlp	Relaphone Number
	2,	Turkey Point Nu	iclear Generating	Station - coordin	ates of propo	sed wells att	ached		
		Well Location - Address			ak data k	F # 11035	A	04-873-476	. }
88	3.	Well Origing Contractor	leet dig and Chie	ulting, Inc Philli	Joense No.	U # 13,000	76	lephone No.	ABRY AND
E S		396 Plasters Ave			104119B 1104	, NE 1/4			
類		Address	**************************************				of SE 1/4 of Sections		├
Š		Atlenta	Georgia	30324 Zīp			(makan 575	Well on Chart	[
흏릛	Ĉ	City	Shite	Ζp	·	5. Township	Rango	40.0	X
	Æ.	Miami-Dade	N/A		N/A	N/A	N/A		
25		County	Sı	ibdivision Name	La		Block L	init	8W SE
	7.	Number of proposed	wells 1 Checki	the use of wall; (See back	of poemit for additional	thology)	Domestic Month	or (type) Ohse	ervation well
J		intaction i		er Supply (type)			•		
	•	(See Sud) Distance from septic	System IN/AL	Description of facility	Ind. wantewater clicker	Re Area Estimati	ed start of construction	on date 2/19	/08
	8.	Application for X	_ New Construction	Repair/Modify	Abando	nment	(Reason for Abandonman		Samp VV
	9,	Estimated: Well Dept	, <u>26* ft</u>	Casing Depth PVC rvc Casing Diamete	15 ft	Sone	Resean for Abandonment en interval from ¹⁵ Material see below	to 25	TO WAY O COUNTY
	10.	-	ed From 13 t	0 25 See Materi 0 13 See Materi 0 10 See Materi	10/20 silica	sand We	H will be localized will a on	Description of the second	Missouri Dede county Nitroit Dede county with an X. Nanthy known n well and landmarks.
	11.			eck one) Diameter 2 ⁿ			W-805U	North	·
	12.			Cable Tool		tion		M	
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	ŀ -		-	List number of unuse		136	see situcked drav	vings for pro	posed well locations 質
	14.			rawa) on the owner's co					
				JP/WUP) of CUP/WUP A	ipplication? A.	YOY98			,
		(If yes, complete the fo		No. N/A			•		
		District well I,D. No. Platitude N/A	Longitu	N/A		. }			
	1				m NAD 27 A	AD 83		South	
	١.	Data obtained from Gi		· · · · ·		,			
	75	I hereby certify that I will come and that a water use points in proving command of we application in accounts and in application in accounts and in application in the control of the proving and in the control of the proving points of the pro	ply with the repailsable name of of all lineal repairings parent, it is all compared by . I had have overly it set is will charten the company address agrees to provide a well company interest or provide a well company plants on provide a well company plants on the company of the plants of the company of the plants of the company of the plants of the company of the plants of the company of the plants of the company of the plants of the company of the plants of the company of the plants of the company of the plants of the company of the plants of the plants of the company of the plants of the plants of the plants of the plants of the plants of the plants of the plants of the plants of the plants of the plants of the plants of plants This 40, Florida Administrative Co educt, has been or will be obtain the dill information provided on the risk from other telders), state, or k on report to the District within 50	de, (certly) C telepone s the age cal sponsib	ngi I arr big dyffar ol n Genede Linciae Crispiet S (for the gyrrae) bet big Idan ng stated altown. C	73, Floride Statistics, to material importantion provided is score writer portains to paragraph of	Griphoperiy aband	to, and that I am greate of my on this want, or, loadly from I am accommend the owner of the re- secritative access to the even give. 21655	
		Bignisture of Consector	7.000	License No.	'		Chipping or Agent's B	neura .	Data
			, no	NOT WELL BLOV	5 11115 E11VE	FOR OFFICIA	L'USE OMEY		
		Approval Granted By	: AGTEND 14	WAROS	<u> </u>	_ feette (Date;	1908	Hydrologic	Approved
		Owner Number:		Fee Rec		Recs(pt)		Check No	たんし くろい
		THIS PERMIT NOT	VALID UNTIL PROPERI	I SIGNED BY AN AUTH	ORIZED OFFICE	R OR REPRESE	, day and full, fourd) VIATIVE OF THE WMC ate of ISSUE,	gif year.). IT SHALL B	E AVAILABLE AT THE
		Form 0123 R			· -	•	•		Lacry .

1	. (REPAIR, MOD Bouthwest Northwest St. Johns Fi South Florid Suwannee	Ver The water wall form and forms	A WELL UST BE PILLED OUT COMMENTO IS RESPONSE UNITED THE PROPERTY TO THE REPORT OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE REPORT OF THE PROPERTY OF THE PRO	COMPLETELY. bits for completing this appropriate delegated	Permit No. 19/5 G Florida Unique (.D. Permit Stiputations Requ B2-524 well SUP Application No.	ired (See Attached)
	1.	Florida Power an	nd Light Comp	any, Attn: Mr. Ed P	aula 9700 SW	344 Street Flori	ida City 33034	305-246-6407
		Owner, Legal Name of I	• •	** · · · · · · · · · · · · · · · · · ·	Address	City ,	Zip	Telephone Number
				ng Station - coording	ites of propose	d wells attached		
		Well Location — Address	IS, Rond Name or Nu	mber, City Istilting, Inc Philli	n K Pitte PL:	¥ 11035	404-873-47	61
8 8	3.	Well Drilling Contractor			icense No.	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Telephone No.	
taranga envelopo wezo		396 Pinsters Ave		•		NW 1/4 of SE		
5 5		Address				(bigges) (biggess	(Indicate Well on Cha	-
Ğ		*·	Georgia	30324		. Township 57S	,	`
26	,	City	State	Zīp			Hange TOX	· X
9	ō.	Miami-Dade	N/A		N/A	N/A	N/A	
		County		Subdivision Name	Lot	Block	Unit	SW SE
	7.	Number of proposed		K the gae of wall: (See back)	of permit for additional choice	en)Dorne	etic Monitor (type) Ob	servation well
•	8. 9.	Application for: X Estimated: Well Dept Gasing Ma	New Construction h 101* ft sterial: Blk-Steel/Ga	Description of facility Repair/Modily Casing Depth / PVC rvc Casing Diamete 10 100 Seal Materia 10 95 Seal Materia	Abandonn 90 ft			9/08 OCHUN AND COMUN AND AND AND AND AND AND AND AND AND AN
	11.	Telescope Casing	From 0 or Liner × (c) / PVC PVC Other (s) on: K Rotery	to 83 Seal Materia theck one) Diameter 2" vecky: Cable Tool	Portland/hentonits	OW-8	well location and indicate west and indicate wes	Me with X. Identity known we well and landmarks.
		is this wall or any oth	er well or water with aWater Use Permit (stowing) CUP/WI N/A	List number of unused drawst on the owner's condition on the owner's condition on CUP/WUP A IP No. N/A	ntiguous property	covered >		opoacd well locations 强
		Data obtained from GF	28 or map	or survey (map detur	NAD 27 NAD	69/	South	
	15.	I hereby partly that I refl come and frat a writer use permit to prior to commencement of war approximents. If any prior to permit the propriate and pro- comments. If any prior services prior of language prior services Brossource of Commence	or with the applicable rules in attribute to the state of	it Tale 40, Flexida Administrative Cod readed, hist been or will be chained your all information provided on this park from their legistal, series, or for a form report to the Dertick within 30 d Light and the Company No.	a, certify that, it temporals the special for the special for the special for the special for the special special for the special special for the special for		nag the information provided is accused to these, to maintain or properly star provided is accurate, and five i have a separate of the Vigillo or a regime of the Vigillo or a regime of Wighton or a regime of Wighton or a regime of Wighton or a regime of Wighton or a regime of Wighton	rate, and that I are arrans of my odon this wait or, I are thy that I are a recommend the owner of he are independent of the re-independent of the results o
			11		THIS LINE FO	OH OFFICIAL USE C		
		Approval Granted By:	Ac	DWARPS		Bue Date: 2-19	一〇名 Hydrolog	let Approval
		Owner Number:		Foe Rece	wed: \$ 50	Receipt No.: 10	021546 Check No	524534
		THIS PERMIT NOT V	ALL DRILLING OPE	RILY SIGNED BY AN AUTHORIST THE Permit 1	Enter nun PRIZED OFFICER O	erical month, day and	d full, four-digit year. OF THE WMD, IT SHALL (DE AVAILABLE AT THE

- FEW MICH. MICH

			RIEPAIR, MCIDIFY, Southwest Northwest St. Johns River South Floride Suwanner River	The water well con- form and forwarding	FELL. THE FILLED OUT CONTINUES IN THE PROPERTY OF THE PROPERTY	APLETELY.	Permit No. 1976 C Florida Unique I.D. Permit Stipulations Requ 62-524 well SUP Application No.	ired (See nitached)
	1.	Florida Power a	nd Light Company,	Attn: Mr. Ed Paul	a 9700 SW 3	14 Street Florid	ia City 33034	305-246-6407
	i		Entity if Corporation		Address	City .	Zip	Telephone Number
			iclear Generating S		s of proposed v	vells attached	•	•
		Well Location - Address	s, Road Name of Humber,	City ·				
2 1	3.	MACTEC Engir	reering and Consult	ing, Inc Phillip F	C. Pitts FL#1	1035	404-873-47	/61
100 min 004		Weil Drilling Contractor	4	Licen	88 No.		Telephone No.	MW NE
8		396 Plasters Ave	nue		. 4. <u>I</u>	TW 1/6 of SE	1/4 of Section 33	
3 8	-	Address				marreed (pi@gast)	(Indicate Well on Che	(hr
ă		Atlanta	Georgia	30324	· ·	ownship 578		- X
		City	Slate	Zip		• *		
	₿,	Miami-Dade	N/A		, N/A	N/A. Block	N/A	
		County	Subd	Malon Name	Lot	Block	Unit	SW SE
	7	Mumber of systematic	wells 1 Chickthe	HER OF WELL BY	mis dan seletikan di akabamat	Domes	tic Manitor (type) Oh	servation well
	8. 9. 10. 11. 12.	Distance from septio Application for: X Estimated: Well Dept Casing Mr If applicable: Frances Grouting Interv Telescope Casing Brk-Steel / Galvanized Method of Construction X Auger Indicate intal No. of v Is this well or any off ander a Consumptive	From 9 to on Liner	Appain/Modify Casing Depth 15 C rec Casing Diameter 2 Seal Material 13 Seal Material B One) Diameter 2" Cable Tool at number of unused we rel on the owner's contig WUP) or GUP/WUP Appli	Abandonment (1) (1) (2) stitics saud monits saud monits mulant/pentonits street saud monits (1) (3) (4) (5) (6) (7) (8) (8) (9) (9) (9) (9) (9) (9	(Reason for Screen Innerve Seat Material - Well will be instituted and length of West Seat Material - West will be instituted and length of West Seat Material - West West Seat Material - West West Seat Material - West West Seat Material - West West Seat Material - West West Seat Material - West West Seat Material - West Seat Material - West West Seat Material - West Seat Material - West Seat Material - West Seat Material - West West Seat Material - West Seat	Abandomment) If from 25 to 25 age below halled with a ene-fact samp of location and indicate well arias; provides distances below North	Day Table 10 County incomes and landmarks.
	15.	I hereby certify the 13 mile come and that is writer use parmit of the second common than pile application to accommence and the application to accommend and the operation of the second common certification of the second certi	ply with the applicable rules of Title / e artifact, inchings premit, il oseder il construction. I further only if that is all will, continued a further artifacts of all continued a further inching the figure betyroods a further in the inflict, chickens, occups for i.	to, Florida Administrative Code. 1. has been or will be obtained in bromation or will be obtained in bromation or will be obtained on other federal, state, or local port to the Diatrick Willia 30 days.	f carbly Past I am t responsibilities an the agen) for the c sponsibilities as at	the commet of the property, the der Chapter 87g, Fichicle Sta womer, Blat Res Information pl parties above. Owener comment	If the Information provided is easily in the Information provided in account or properly accomplished a section countries, and that I have taken provided on the Wife Dury a re-	and and that I am award of my office of the second of the
		Right of Contacts	D. P.	License No.		Own		Date
				or weith the low th	-		<u> </u>	
		Approval Granted By:	AGTUD EDU	Mac	I BBUG		11,010101	fot Approval
		Owner Number:	·	Fee Received		TO COURT IN THE PARTY OF THE PA	0215406 Check N	0.52 4534
		WELL SITE DURING	/ALID UNTIL PROPERTY S ALL DHILLING OPERATION		ZED OFFICER OR F	REPRESENTATIVE O		BE AVAILABLE AT THE
		Earm 0123 134	our ASSIS					

FAX #: 919-831-8106



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STATE	OF EL CRIDA	DEDMIT	APPLICATION	TO CONSTRUCT
A1541#	O. (E.), ((D)	LFLIMIL	Mar Lichtica	10,00140111001
REDAIR	R. MODIFY, O	R ABANI	SON A WELL	

☐ Slouthwest ☐ Northwest ☐ Sit, Johna River ② Slouth Floritia ☐ Sluwannee River

THIS FORM MUST BE PILLED OUT COMPLETELY.

The water well contractor is responsible for completing this form and forwarding the permit to the appropriate delagated

county	Mitte	applica	ble,

Permii No. 3-59- 2	160
Florida Unique I.D.	
Permit Stipulations Required (See a	Harkett
Lessing Ashmenons tradition (Seb s	
, , ,	
62-524 well CVB Application No.	

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١.	Florida Power an	d Light Compa	iny, Attn: Mr. Ed Pau	in 9700	SW 344 S	itreet Flori	da City	33034	305-246-6407
1	Owner, Legal Name of E			Address		City	· · · · · · · · · · · · · · · · · · ·	2lp	Telephone Number
1,	Turkey Point Nu	clear Generatio	g Station - coordinate	es of prop	osed well	s attached		•	
-	Well Location - Address	s, Road Name of Nur	nber, City						
3	MACTEC Engin	cering and Con	sulting, Inc Phillip	K. Pitts 1	FL # 1103	5	40	4-873-476	1
1	Wall Drilling Contractor		***	nse No.			Tel	ephone No.	NW NE
ġ	396 Plasters Ave	nue	•		A NW	1/4 of NE	1/4 of Section	33	X
	Atidiess				(emailed	(plabers			, h
	Atlanta	Georgia	30324			575	•	Well on Chart	"
	City	State	Zip		5. Town	nhip 575	Aunge	40.6	
	Mlami-Dade	. N/A		N/A		N/A	N/A		
i •	County		Subdivision Name		Lot	Black	V	nlt	ew se
	Numbered		k the use of well: (See back of pa			0	ما المعالم	- Maria Obse	ervation well
1	. митает стргоровес ч	/Bills Checi					ec Marito	(type) Obs	CA TREADIL TO CO.
1	(See Baok) Impation (t	ype) Public W	ater Supply (type)	. # I.i	List (Other			
1	Distance from sections	ovetem N/A #	. Description of facility Toli.	namental igniy Ament	itajis nrek 👸		f constructio	n date 2/19	/08
١.									Description of the second of t
1	• •		Repair/Modily	Abeni	denment	(Resson to	Abandonment		
۱,	. Estimated: Well Depth	101* ft	Casing Depth 90	ft		Screen Interv	at Irom ⁹⁰	to 100 101	y way
ľ	Casino Ma	terial: Bik-Steel / Gel	/PVC rvcCasing Diameter			Seal Material	sec below		AN AN COUNTY
	-					*Well will be in	stalled with a one	Shot aus Mil	Missour Dede Count
10	, if applicable: Propose	d From 88	to 100 Seal Meterial	10/20 \$11101	a sand	1112		COST.	Missoury Depart
1	Grouting interva	i From 83	to 85 Seal Material E	<u>Jentonitė</u>	Adda dusa	Daw a mon of u	uali terrolino anti		a with an "X", lolomily known
	•				Mille MB217	roeds and lands	arias; provide di	SEATCHE DECHAR	n well and landments.
11			isck one) Diameter 2"			}		Morth	
	Bik-Steel / Galyantzed /	PVCPVC Other (sp	ecity:			OW-8	12L	1	
172	l. Method of Construction	an: X Rotery	Cable Tool	Combin	nation ·				
1	X Aucur		(tfy:)	3	• • •				
1.			List number of unused w	-6112-	α.				•
•						3 sec 9	itsched draw	ings for pro	posed well locations
17	i. Is this wall or any other	ir well or water with	inwal on the owner's conti	anons buob	erty covered	3	INTERNATION CONTOUR		
1			:UP/WUP) or CUP/WUP App	ileation? 💹	_NoYee				•
1	(If yes, complete the fol	lowing) CUP/MU	P No. N/A						
	District well I.D. No. N	/A					•		
	Latitude N/A	Longit	ide N/A						
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1'	D. I hereby carry that I will comp and their a water use permit or	at gray and extraction these of	FThis 40, Florids Administrative Code, restled, has been or will be obtained * Ast as information provided on the real from other widers. Institut or from the report to the District within 50 days.	i corre	Agent and the comments of the	MIDNEY 373, FRONCIE BR	Militaria, do maintenio	or properly shands	e, and \$184) on even of my or this welt or, correy that I am formed the bener of his fe-
	Application is accurate and the	LI Will bits in nacredary appr	r yell from other technic, Mille, or local Hype record to the District within 5% days.	apone i	bildes as stated a	bove. Owner consum	STATE OF STREET	to hat on a hale	contains supers to the well alto
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	Approval Granted By:	<u> </u>	Ishan Likelis		lesue Date			,	inkata (**)
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	Owner Number:		Fee Receive	V. 3	F80L	nonth, day and			A Character of the Control of the Co

Form 0123 Rev. 4/95

_SEWENDLEDY

	(RIPAIR, MODIFY, Southwest Northwest St. Johns River South Florida Suwannes Rive	form and forwarding the	FILLED OUT CO for is responsible to permit to the a le.	DMPLETELY. B for completing this	Permit No 10/5 C Florida Unique LD. Permit Stipulations Required 62-524 wall SUP Application No.	ired (See altached)
١	•	Florida Power at	nd Light Company	Attn: Mr. Ed Paula	9700 SW	344 Street Flori		
	3.	Owner, Legal Name of E	Entity if Corporation	Adi	ress	City	Zlp	
	2.			tation - coordinates of	f proposed	wells attached		
			s, Road Name or Number.		3144 F37 JL	11025	40 4 002 40	124
Ę	3.	Well Drilling Contractor	teering and Consul	ting, Inc Phillip K. I	ins fl#	11035	404-873-47 Telephone No.	
2		396 Plasters Ave		License		NW are at NE	•	NW NE
codie through anycopo		Address			4.	NW 1/4 of NE (Deposit	114 Of Section	-
Š		Atlonta	Georgia	30324		57C	(Indicate Well on Cha	
Š		City	State	<i>Z</i> 2p	5 .	Township 375	Range 40E	· []
ş	R	Minmi-Dade	N/A		N/A	N/A. Block	, N/A	
9		County	N/A Subc	fiviaion Name	Ļai	Block	Unit	\$W \$E
	7.	Number of proposed t		i case of WOTE (See back of permit to	w additional choice)Domes	itio Manitor (type) Ob	servation well
					•			
	•	(844 Brok) Distrace from saptic	system N/A tt. D	Supply (type) (See Best escription of teulity 2st water) Pater discharge are	Estimated start o	f construction date 2/1	9/08
	8.	Application for: X	New Construction	Repair/Modily	_ Abandonma	nt		Osje Storio
	9.	Estimated: Well Depti	h 26* ft	Cashing Deptit 15 ft CrycCasing Diameter 2" Seal Material 10/2 Seal Material Fortis		(Research to Screen Intervi	r Abandonment) at from 15 to 25	66 By Way
	ŧn.	Casing Ma If applicable: Propose	iferfal: Bik-Steel/()gi/PV	C rycCasing Diameter 2"	O silica sanı	Soul Material *Well will be for	see below	ni do / Dade Com
		Grouting Intervi	at From 10 to	13 Seal Material Benton 10 Seal Material Porting	nite mul/bentonite si		Total formation and lock-sia well a	the method of the territory browns and send tendersarias.
	11	Talagana Castus	and lane X deback	one) Diameter 2"		noeds and lender	arios: priváde distances beim	ers well and landmarks.
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						— UW-8.	120	
	12.			Cabie Tool	Combination :		/	
	19.			ist number of unused wells o	on elte <u>0</u>		-	
	14.	Is this well or any oth	er walf or water withdraw	ral on the owner's contiguou	s property co	vaned 🞉 sec al	tached drawings for pr	opeard well locations
		under a Consumptive	Water Use Permit (CUP/	WUP) or CUP/WUP Applicati	on? X No _	_Yes		•
		(If yes, complete the fo						
		District well I.D. No. N					•	
		Latitude N/A	Longitude .	N/A		}		
		Data obtained from GF	or wab or si	urvey (map dietum NAD 2)	7 NAD 83		South:	
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	١.	prior to obstruencement of well application is accurate angula	looneliseson, i further outify that a all will combin necessary expressed in	il leformation provided on this om other tedenti, atter, or local	gle about for the	owner, that the information of	It the information provided is social buties, to mealntain or properly aben regided in socialist, and little (viting and pergament of this WAID of a less	inscrined the tweet of his se- reception accept to the well also.
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	\	Yell	1600	1/035			IMIYU	417101
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	بهجيد	Approval Granted By:	ALTER ED	WAROS		e Dane: 2/19-		et Approvet
					<i>5</i> 5	: - [202 1612 Car	524534
		Owner Number:	·	Fee Received: \$	Enter nume	Receipt No.: 107	full, four-digit year.	
				desirohtua na yeldendig Dilav et timpeq eint .ekk	officer or	REPRESENTATIVE C	f the wind, it shall b	E AVAILABLE AT THE
		Form 0123 Re	v. 4/95	•		•	JE MINOS	Lask.

Observation Well Records

Prepared by: CBS Date: 7-10-08

NOTES:

Centralizer installation depths not recorded

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'

Static water measurement collected 6/4/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

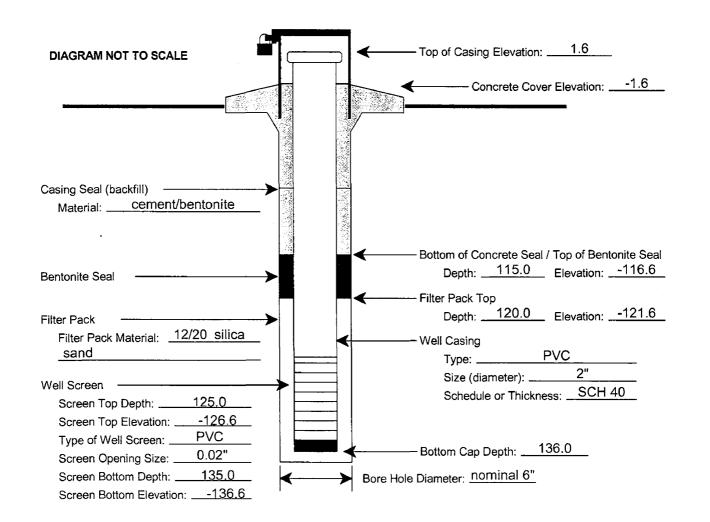
Geologist, Hydrologist, or Engineer Supervising Well Installation: Harry Lyatuu

Static Water Level Elevation (with respect to NAVD88) after Well Development: 1.3

Name of Geologic Formation(s) in which Well is completed: See boring log B-606

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel



Prepared by: _

Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.: 13-59-2243
County:Miami-Dade County, Florida	Observation Well I.D.: <u>OW-606L</u>
Date of Observation Well Installation: 5/14/08	Date of Well Development: 5/17/08
Observation Well Northing: 396979.9 US ft Easting: 876732.6	<u>US_ft</u>
Observation Well Location:Main Island	Observation Well Driller
	Name: <u>Miller Drilling/MACTEC</u>
	License No.:11035_

NOTES:

Two, stainless-steel centralizers installed at approximately 47 ft. and 96 ft.

PVC well screen machine-slotted by the manufacturer.

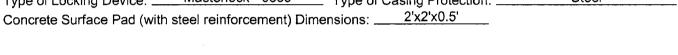
Observation well developed using a submersible pump.

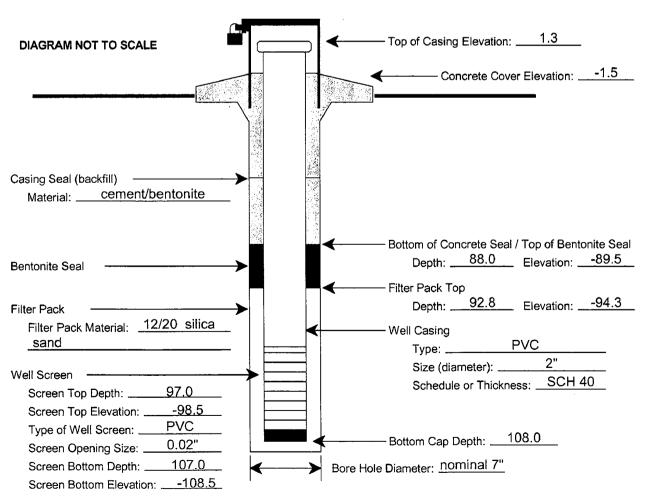
Static water measurement collected 5/18/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Drill bit lost in hole at 110.0 ft. Bentonite seal installed from 109.0-110.0', with approval of Bechtel.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kim Charles-Smith Name of Geologic Formation(s) in which Well is completed: See boring log B-606 Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel





Project Name / No. :Turkey Point Power Station / 6468-07-1950	Observation Well Permit No.: 13-59-2241
County: Miami-Dade County, Florida	Observation Well I.D.: <u>OW-606U</u>
Date of Observation Well installation: 4/22/08	Date of Well Development: 5/1/08
Observation Well Northing: 396938.0 US ft Easting: 876734.8	<u>US ft</u>
Observation Well Location:Main Island	Observation Well Driller
	Name:Miller Drilling/MACTEC
	License No.:11035

NOTES:

One stainless-steel centralizer installed at approximately 11.5 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/20/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

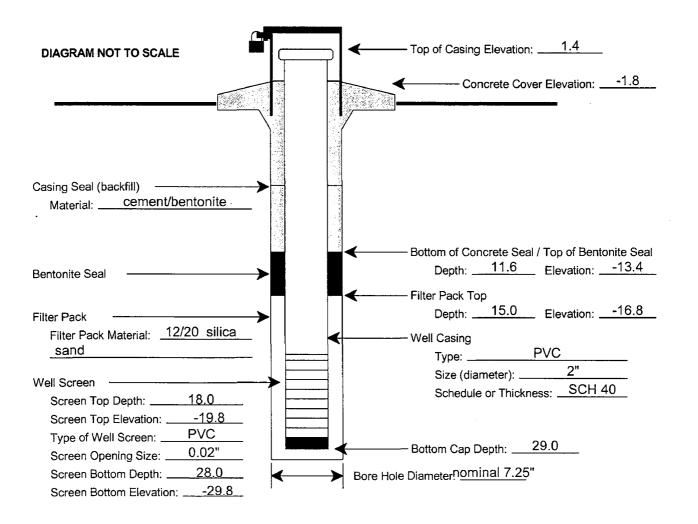
Geologist, Hydrologist, or Engineer Supervising Well Installation: Kim Charles-Smith

Static Water Level Elevation (with respect to NAVD88) after Well Development: -2.1

Name of Geologic Formation(s) in which Well is completed: See boring log B-606

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: ____2'x2'x0.5'



Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.: 13-59-2242
County: Miami-Dade County, Florida	Observation Well I.D.: <u>OW-621L</u>
Date of Observation Well Installation: 4/18/08	Date of Well Development: 5/3/08
Observation Well Northing: 397364.5 US ft Easting: 876970.0	US ft_
Observation Well Location: <u>Main Island</u>	Observation Well Driller
	Name:Miller Drilling/MACTEC
	License No.:11035_

NOTES:

Two, stainless-steel centralizers installed at approximately 48 ft. and 98 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/17/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Chris Burroughs

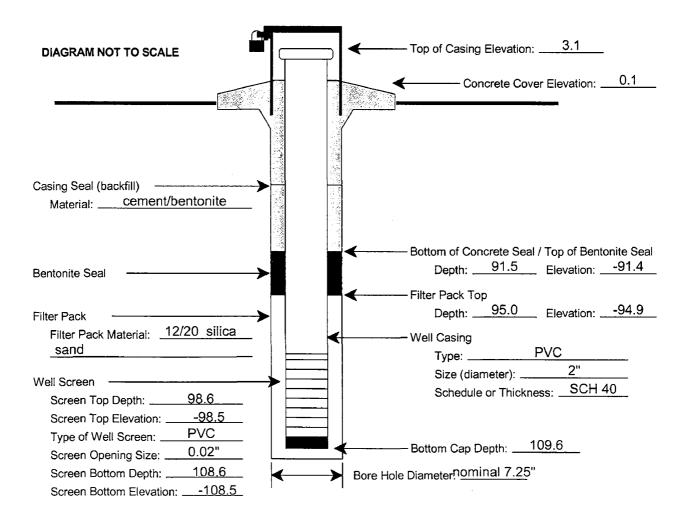
Static Water Level Elevation (with respect to NAVD88) after Well Development: -1.0

Name of Geologic Formation(s) in which Well is completed: See boring log B-621

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.: 13-59-2244
County: Miami-Dade County, Florida	Observation Well I.D.: <u>OW-621U</u>
Date of Observation Well Installation: 4/19/08	Date of Well Development: 5/3/08
Observation Well Northing: 397375.8 US ft Easting: 876930.0	US ft
Observation Well Location:Main Island	Observation Well Driller
	Name:Miller Drilling/MACTEC
	License No : 11035

NOTES:

One stainless-steel centralizer installed at approximately 11 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/20/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Chris Burroughs

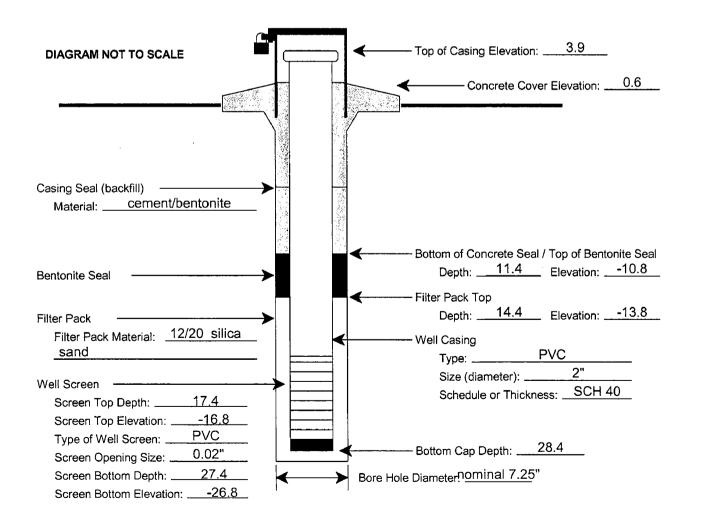
Static Water Level Elevation (with respect to NAVD88) after Well Development: -1.8

Name of Geologic Formation(s) in which Well is completed: See boring log B-621

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: ____2'x2'x0.5'



Observation Well Northing: 395290.8 US ft Easting: 877257.2 US ft

Observation Well Location: ____South Island ____ Observation Well Driller

Name: MACTEC
License No.: 11035

NOTES:

Two, stainless-steel centralizers installed at approximately 49.5 ft. and 96.6 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/21/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Encountered an apparent obstruction at 69.3 ft.

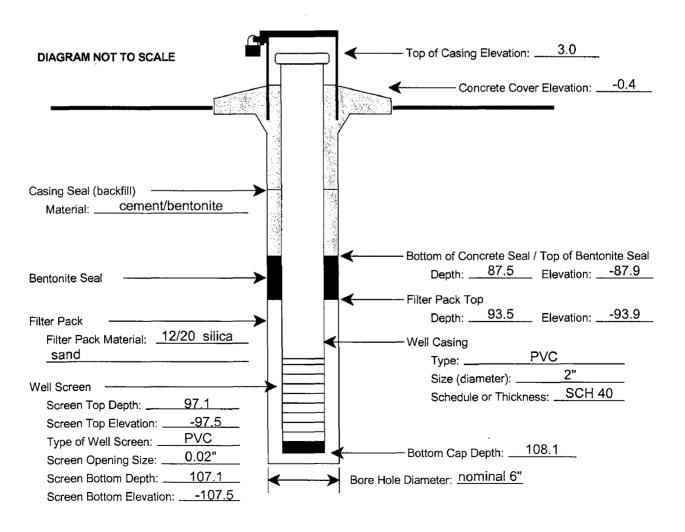
Geologist, Hydrologist, or Engineer Supervising Well Installation: Chris Burroughs

Static Water Level Elevation (with respect to NAVD88) after Well Development: 0.3

Name of Geologic Formation(s) in which Well is completed: See boring log B-806

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Project Name / No.:Turkey Point Power Station / 6468-07-1950	Observation Well Permit No.:13-59-2245
County:Miami-Dade County, Florida	Observation Well I.D.: <u>OW-636U</u>
Date of Observation Well Installation: 4/3/08	Date of Well Development: 5/5/08
Observation Well Northing:395285.8 US ft _ Easting:877215	5.7 US ft_
Observation Well Location:South Island	Observation Well Driller
	Name: <u>MACTEC</u>
	License No.:11035_

NOTES:

One stainless-steel centralizer installed at approximately 16.5 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/21/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Chris Burroughs

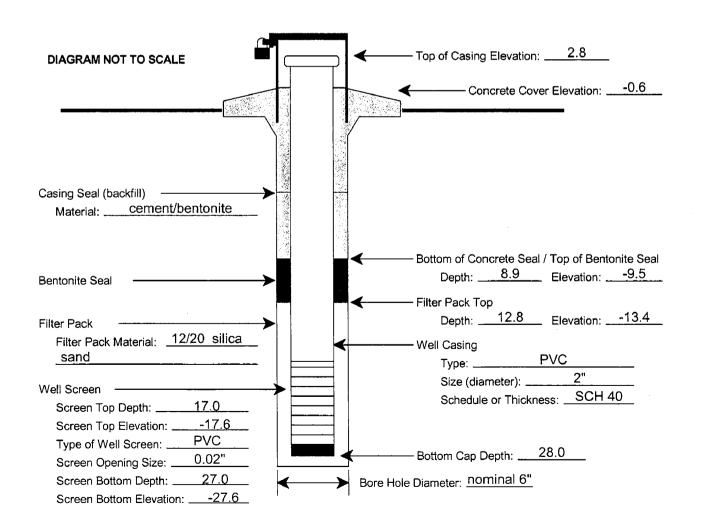
Static Water Level Elevation (with respect to NAVD88) after Well Development: -1.6

Name of Geologic Formation(s) in which Well is completed: See boring log B-806

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Prepared by: Date: 7-70-08

Checked by: CBS

County: __Miami-Dade County, Florida Observation Well I.D.: __OW-706D_

Date of Observation Well Installation: 5/29/08 Date of Well Development: 6/4/08

Observation Well Northing: 396960.1 US ft Easting: 875864.4 US ft

Observation Well Location: Main Island Observation Well Driller

Name: MACTEC

License No.: ____11035

NOTES:

Centralizer installation depths not recorded

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 6/4/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

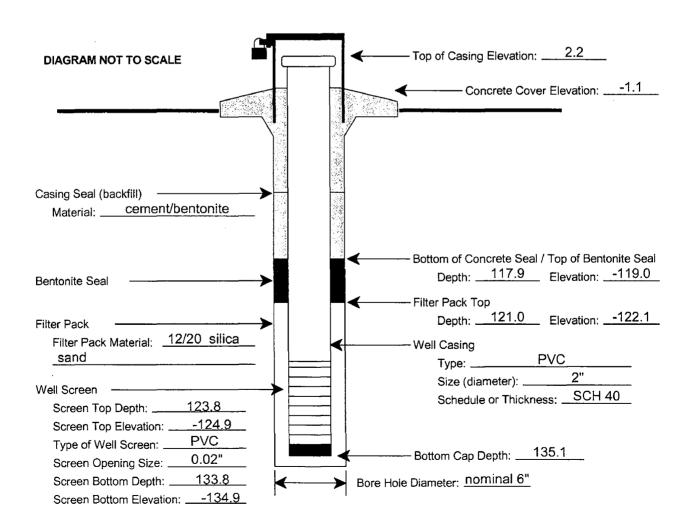
Geologist, Hydrologist, or Engineer Supervising Well Installation: Chris Burroughs

Static Water Level Elevation (with respect to NAVD88) after Well Development: 1.4

Name of Geologic Formation(s) in which Well is completed: See boring log B-706

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Prepared by: USF Date: 7-10-08

Checked by: ____CB5

County: __Miami-Dade County, Florida Observation Well I.D.: __OW-706L

Date of Observation Well Installation: 3/25/08 Date of Well Development: 4/30/08

Observation Well Northing: 396978.2 US ft Easting: 875904.6 US ft

Observation Well Location: ____Main_Island___ Observation Well Driller

Name: MACTEC

License No.: ____11035_

NOTES:

Centralizer installation depths not recorded

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/16/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

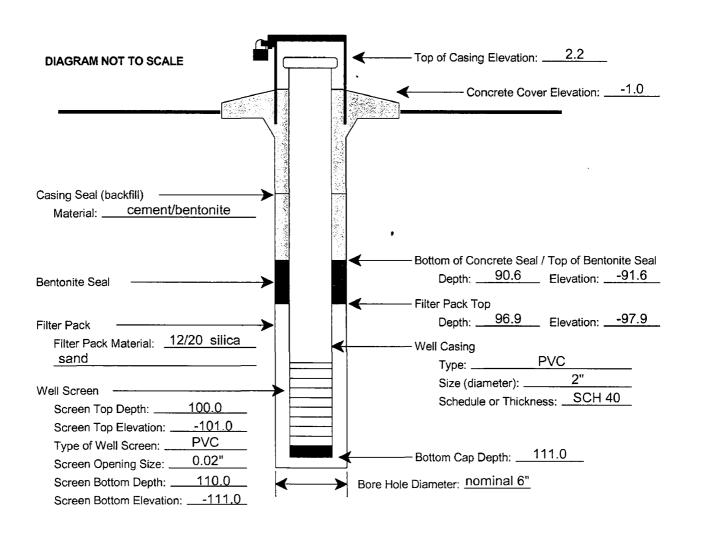
Geologist, Hydrologist, or Engineer Supervising Well Installation: Chris Burroughs

Static Water Level Elevation (with respect to NAVD88) after Well Development: 0.7

Name of Geologic Formation(s) in which Well is completed: See boring log B-706

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Prepared by: USL- Date: 7-0-28

Checked by: CBS Date: 7/10/03

Project Name / No. :Turkey Point Power Station / 6468-07-1950	Observation Well Permit No.: 13-59-2247
County: Miami-Dade County, Florida	Observation Well I.D.: <u>OW-706U</u>
Date of Observation Well Installation: 3/27/08	Date of Well Development: 4/30/08
Observation Well Northing: 396940.1 US ft Easting: 875895.7	US ft_
Observation Well Location: Main Island	Observation Well Driller
	Name: MACTEC
	License No.:11035_

NOTES:

One stainless-steel centralizer installed at approximately 16.28 ft.

PVC well screen machine-slotted by the manufacturer.

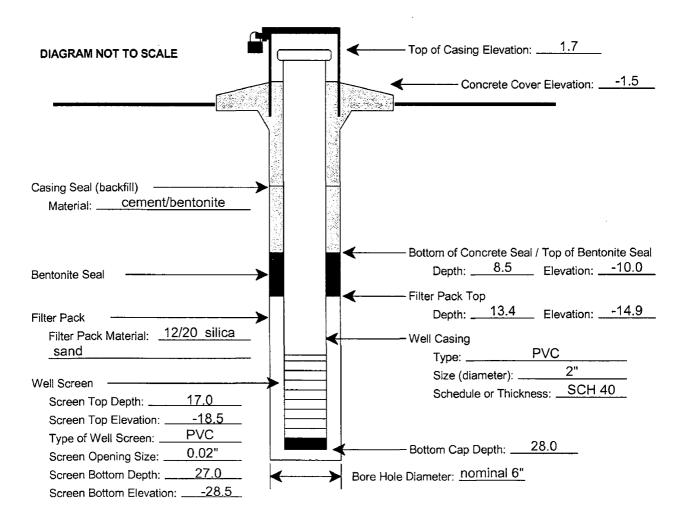
Observation well developed using a submersible pump.

Static water measurement collected 5/16/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Chris Burroughs
Static Water Level Elevation (with respect to NAVD88) after Well Development: -2.0
Name of Geologic Formation(s) in which Well is completed: See boring log B-706

Type of Locking Device: Masterlock - 0536
Type of Casing Protection: Steel
Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.:13-59-2250
County: Miami-Dade County, Florida	Observation Well I.D.: OW-7211
Date of Observation Well Installation: 5/3/08	Date of Well Development: 5/4/08
Observation Well Northing: 397321.5.US ft Easting: 876120.3	<u>US ft</u>
Observation Well Location: <u>Main Island</u>	Observation Well Driller
	Name: <u>MACTEC</u>
	License No.:11035_

NOTES:

Two, stainless-steel centralizers installed at approximately 45 ft. and 95 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/20/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kim Charles-Smith

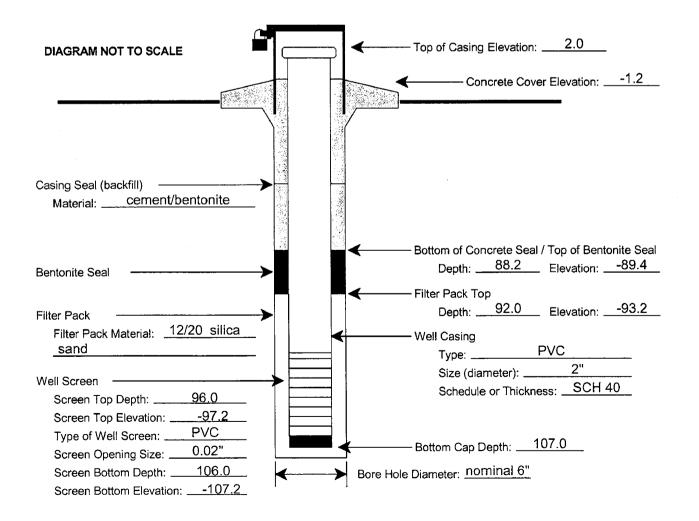
Static Water Level Elevation (with respect to NAVD88) after Well Development: 0.0

Name of Geologic Formation(s) in which Well is completed: See boring log B-721

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Prepared by: USC Date: 7-6-8

Checked by: CBS Date: 7/10/03

Project Name / No.:Turkey Point Power Station / 6468-07-1950	Observation Well Permit No.: 13-59-2249			
County:Miami-Dade County, Florida	Observation Well I.D.: <u>OW-721U</u>			
Date of Observation Well Installation: 5/1/08	Date of Well Development: 5/4/08			
Observation Well Northing: 397361.2 US ft Easting: 876121.4	US ft_			
Observation Well Location:Main_Island	Observation Well Driller			
	Name:MACTEC			
	License No.:11035_			

NOTES:

One stainless-steel centralizer installed at approximately 13.5 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/15/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kim Charles-Smith

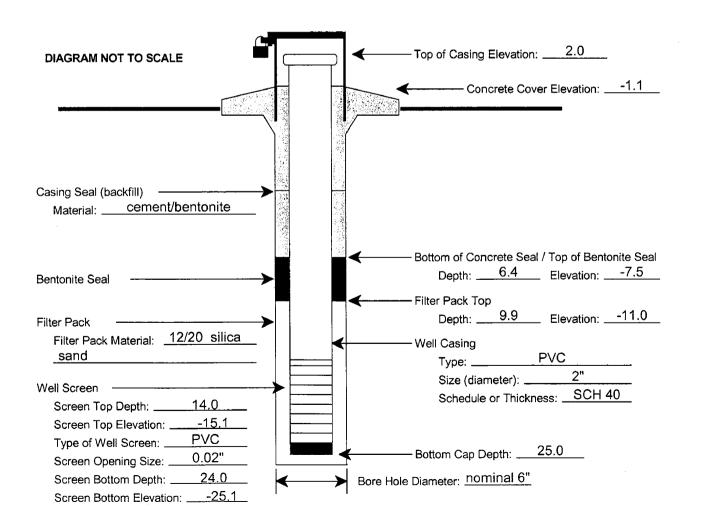
Static Water Level Elevation (with respect to NAVD88) after Well Development: -2.4

Name of Geologic Formation(s) in which Well is completed: See boring log B-721

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Prepared by: Date:

13-59-2252

CBS Checked by: _

Project Name / No.: __Turkey Point Power Station / 6468-07-1950__ Observation Well Permit No.: _

Observation Well I.D.: <u>OW-735L</u>

County: Miami-Dade County, Florida Date of Observation Well Installation: 4/19/08

Date of Well Development: 4/30/08

Observation Well Northing: 395824.3 US ft Easting: 875669.6 US ft

Observation Well Location: ____South Island___ Observation Well Driller

> Name: _____ MACTEC

License No.: ____11035_

NOTES:

Two, stainless-steel centralizers installed at approximately 45 ft. and 96 ft.

PVC well screen machine-slotted by the manufacturer.

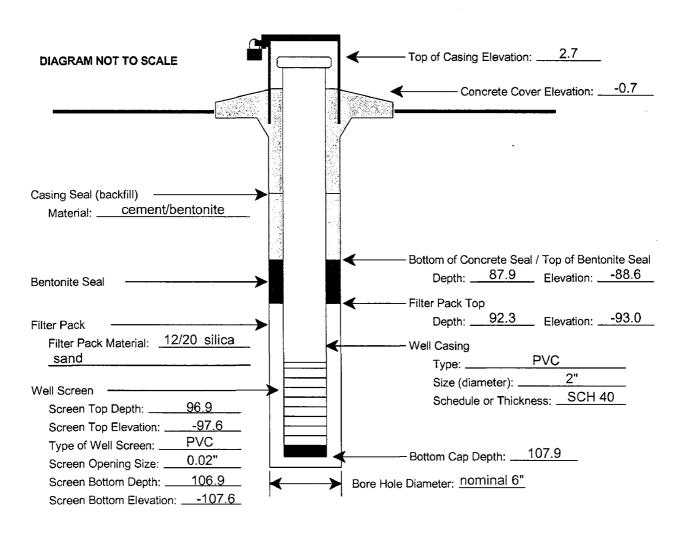
Observation well developed using a submersible pump.

Static water measurement collected 5/13/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kim Charles-Smith Static Water Level Elevation (with respect to NAVD88) after Well Development: __-0.3 Name of Geologic Formation(s) in which Well is completed: See boring log B-735

Masterlock - 0536 ___ Type of Casing Protection: _____ Type of Locking Device: _ Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Page 222 of 537

Prepared by: _ CBS Date: _ Checked by: ___

Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.: 13-59-2251				
County:Miami-Dade County, Florida	Observation Well I.D.: <u>OW-735U</u>				
Date of Observation Well Installation: 4/20/08	Date of Well Development: 4/29/08				
Observation Well Northing: 395823.3 US ft Easting: 875709.2	US ft_				
Observation Well Location:South_Island	Observation Well Driller				
	Name: MACTEC				
	License No.:11035_				

NOTES:

One stainless-steel centralizer installed at approximately 15.5 ft.

Concrete Surface Pad (with steel reinforcement) Dimensions: ____

0.02"

26.0

-26.5

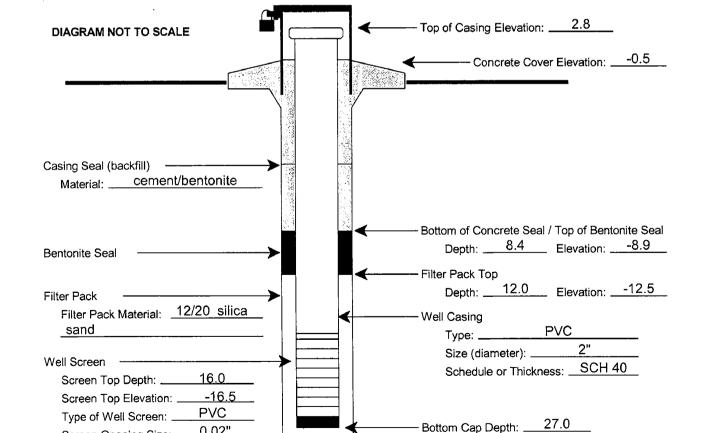
PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/16/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Kim Charles-Smith Static Water Level Elevation (with respect to NAVD88) after Well Development: __-1.9 Name of Geologic Formation(s) in which Well is completed: See boring log B-735 Masterlock - 0536 Steel Type of Casing Protection: ___ Type of Locking Device: ____



Bore Hole Diameter: nominal 6"

Screen Opening Size: _

Screen Bottom Depth: _

Screen Bottom Elevation: _

Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.:13-59-225				
County:Miami-Dade County, Florida	Observation Well I.D.: OW-802L				
Date of Observation Well Installation: 5/3/08	Date of Well Development:5/5/08_				
Observation Well Northing: 398817.1 US ft Easting: 876265.7	US ft_				
Observation Well Location: North Island	Observation Well Driller				
	Name: <u>MACTEC</u>				
	License No.:11035_				

NOTES:

Centralizer installation depths not recorded

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/20/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Harry Lyatuu

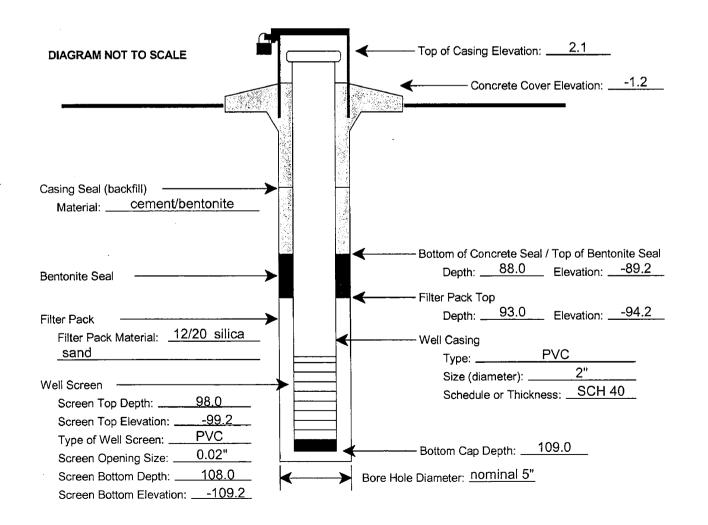
Static Water Level Elevation (with respect to NAVD88) after Well Development: -1.0

Name of Geologic Formation(s) in which Well is completed: See boring log B-802

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Project Name / No.:Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.: 13-59-2253
County:Miami-Dade County, Florida	Observation Well I.D.: <u>OW-802U</u>
Date of Observation Well Installation: 5/4/08	Date of Well Development:5/7/08_
Observation Well Northing: 398820.2 US ft Easting: 876243.7	US ft_
Observation Well Location: North Island	Observation Well Driller
	Name:MACTEC
	License No.:11035_
NOTES:	
Centralizer installation depths not recorded PVC well screen machine-slotted by the manufacturer. Observation well developed using a submersible pump. Static water measurement collected 5/20/08. Upon completion of well installation, MACTEC installed two seep hol Depth to bottom of concrete seal not recorded (NR) and elevation not	

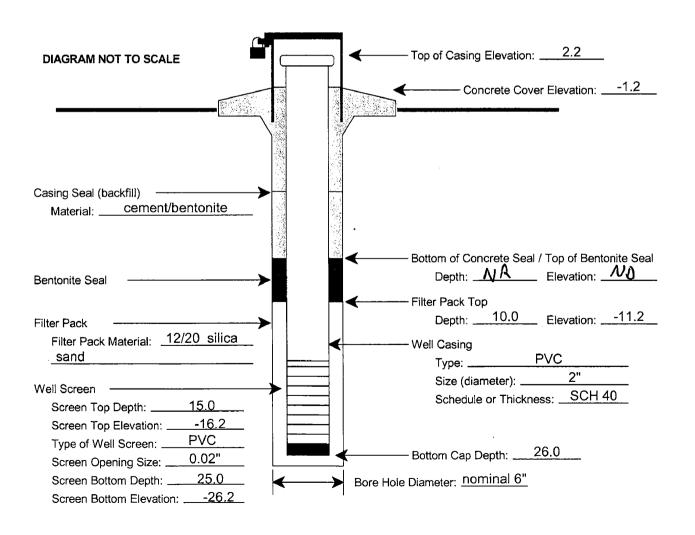
Geologist, Hydrologist, or Engineer Supervising Well Installation: Harry Lyatuu

Static Water Level Elevation (with respect to NAVD88) after Well Development: -2.4

Name of Geologic Formation(s) in which Well is completed: See boring log B-802

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.:13-59-2256
County: Miami-Dade County, Florida	Observation Well I.D.: OW-805L
Date of Observation Well Installation: 5/22/08	Date of Well Development: 6/5/08
Observation Well Northing: 396883.0 US ft Easting: 877239.5	US ft_
Observation Well Location:Main Island	Observation Well Driller
	Name: <u>MACTEC</u>
	License No. 11035

NOTES:

Centralizer installation depths not recorded

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 6/6/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Harry Lyatuu

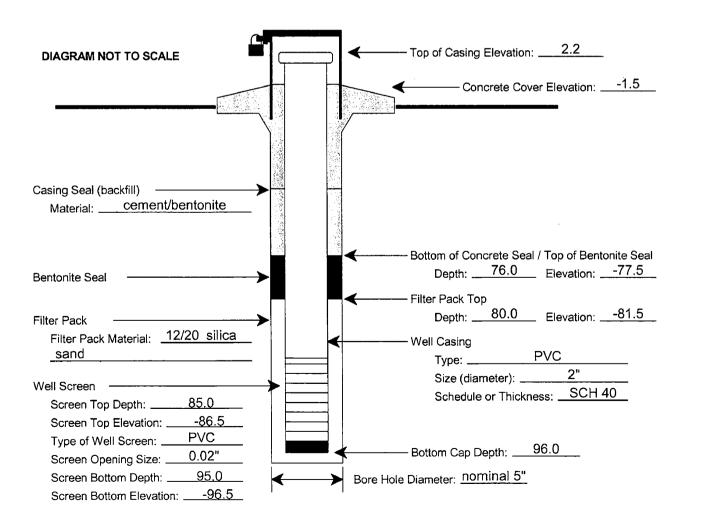
Static Water Level Elevation (with respect to NAVD88) after Well Development: -1.0

Name of Geologic Formation(s) in which Well is completed: See boring log B-805

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Prepared by: _

Checked by: _

Project Name / No. : __Turkey Point Power Station / 6468-07-1950 Observation Well Permit No.: ____13-59-2255

County: Miami-Dade County, Florida Observation Well I.D.: OW-805U

Date of Observation Well Installation: 5/27/08 Date of Well Development: 6/5/08

Observation Well Northing: 396842.8 US ft Easting: 877240.9 US ft

Observation Well Location: Main Island Observation Well Driller

Name: _____MACTEC

License No.: ____11035

NOTES:

Centralizer installation depths not recorded

PVC well screen machine-slotted by the manufacturer.

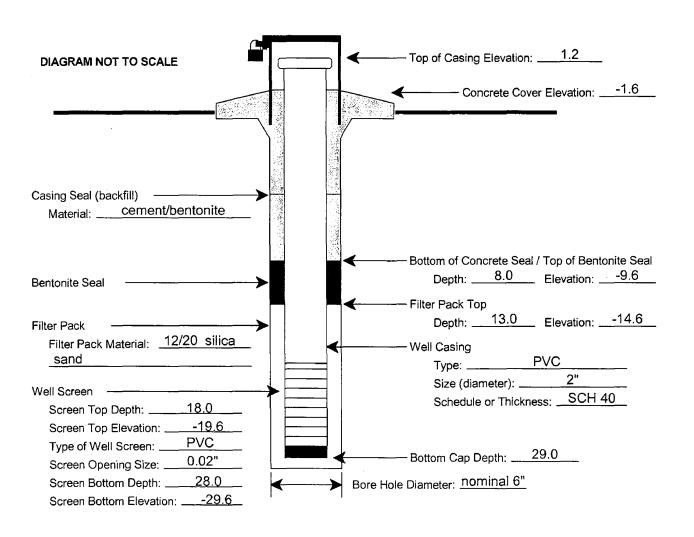
Observation well developed using a submersible pump.

Static water measurement collected 6/6/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Harry Lyatuu Static Water Level Elevation (with respect to NAVD88) after Well Development: Name of Geologic Formation(s) in which Well is completed: See boring log B-805

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: _____ Steel Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Prepared by: Date: 7-0-8

Checked by: C735 Date: 7/10/08

Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.: 13-59-2258
County: Miami-Dade County, Florida	Observation Well I.D.: <u>OW-809L</u>
Date of Observation Well Installation: 5/7/08	Date of Well Development:5/13/08_
Observation Well Northing: <u>397007.9 US ft</u> Easting: <u>875152.3</u>	<u>US ft</u>
Observation Well Location:Main Island	Observation Well Driller
	Name:MACTEC
	License No.:11035_

NOTES:

Two, stainless-steel centralizers installed at approximately 45.5 ft. and 95 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/15/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Gautham Pillappa/Kim Charles-Smith

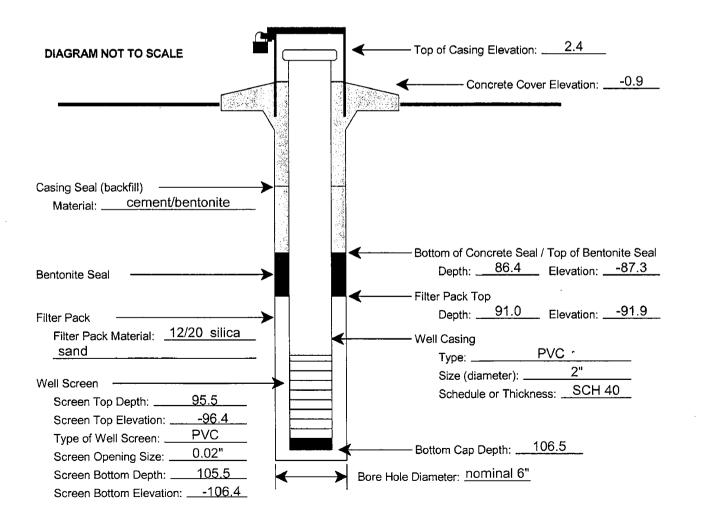
Static Water Level Elevation (with respect to NAVD88) after Well Development: -0.9

Name of Geologic Formation(s) in which Well is completed: See boring log B-809

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Project Name / No.:Turkey Point Power Station / 6468-07-1950	Observation Well Permit No.: 13-59-2257
County:Miami-Dade County, Florida	Observation Well I.D.: <u>OW-809U</u>
Date of Observation Well Installation: 4/1/08	Date of Well Development: 5/1/08
Observation Well Northing: 397045.8 US ft Easting: 875152.4	US ft_
Observation Well Location: <u>Main Island</u>	Observation Well Driller
	Name:MACTEC
	License No.:11035_

NOTES:

One stainless-steel centralizer installed at approximately 14.8 ft.

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/15/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

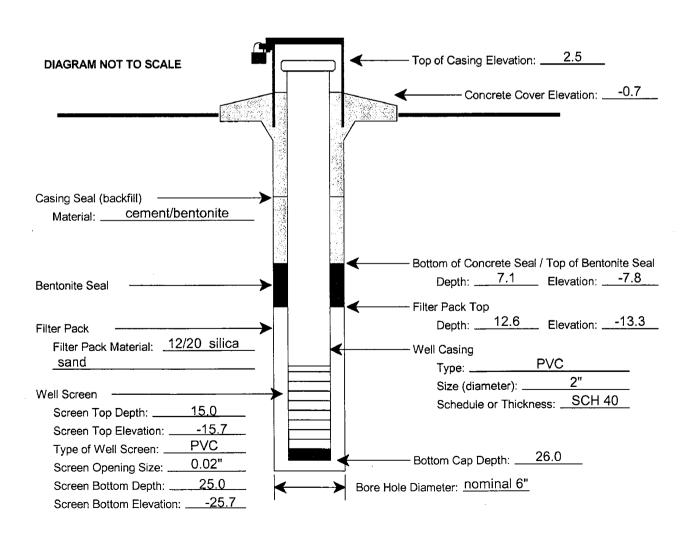
Geologist, Hydrologist, or Engineer Supervising Well Installation: Chris Burroughs

Static Water Level Elevation (with respect to NAVD88) after Well Development: -2.2

Name of Geologic Formation(s) in which Well is completed: See boring log B-809

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Prepared by: Date: 7-10-08

Checked by: CBS Date: 7-10-08

Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.: 13-59-2260				
County:Miami-Dade County, Florida	Observation Well I.D.: OW-812L				
Date of Observation Well Installation: 5/7/08	Date of Well Development: 5/13/08				
Observation Well Northing: 398892.8 US ft Easting: 875045.5	US ft				
Observation Well Location:North Island	Observation Well Driller				
	Name: <u>MACTEC</u>				
	License No.:11035				

NOTES:

Centralizer installation depths not recorded

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/20/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Geologist, Hydrologist, or Engineer Supervising Well Installation: Harry Lyatuu

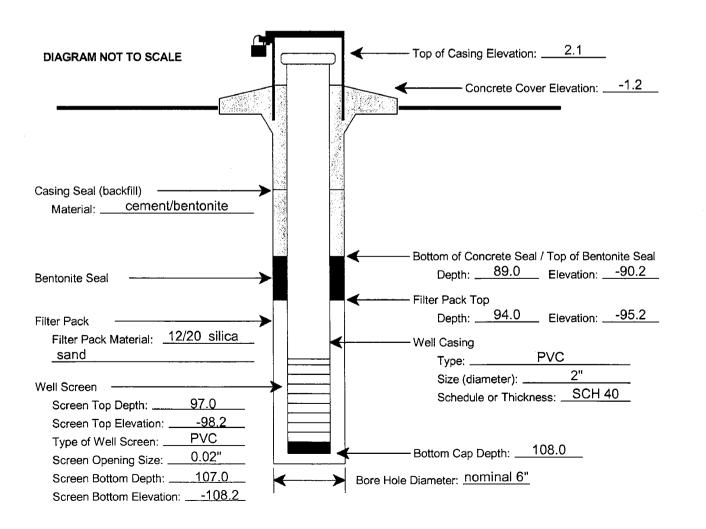
Static Water Level Elevation (with respect to NAVD88) after Well Development: -0.9

Name of Geologic Formation(s) in which Well is completed: See boring log B-812

Type of Locking Device: Masterlock - 0536

Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: ___2'x2'x0.5'



Prepared by: USU Date: 7 to 08

Checked by: C'BS Date: 7/10/08

Project Name / No. :Turkey Point Power Station / 6468-07-1950_	Observation Well Permit No.: 13-59-2259
County:Miami-Dade County, Florida	Observation Well I.D.: OW-812U
Date of Observation Well Installation: 5/6/08	Date of Well Development: 5/7/08
Observation Well Northing: 398933.9 US ft Easting: 875043.5	US ft_
Observation Well Location: North Island	Observation Well Driller
	Name: <u>MACTEC</u>
	License No.:11035_

NOTES:

Centralizer installation depths not recorded

PVC well screen machine-slotted by the manufacturer.

Observation well developed using a submersible pump.

Static water measurement collected 5/20/08.

Upon completion of well installation, MACTEC installed two seep holes in the protective steel cover.

Depth to bottom of concrete seal not recorded (NR) and elevation not determined (ND).

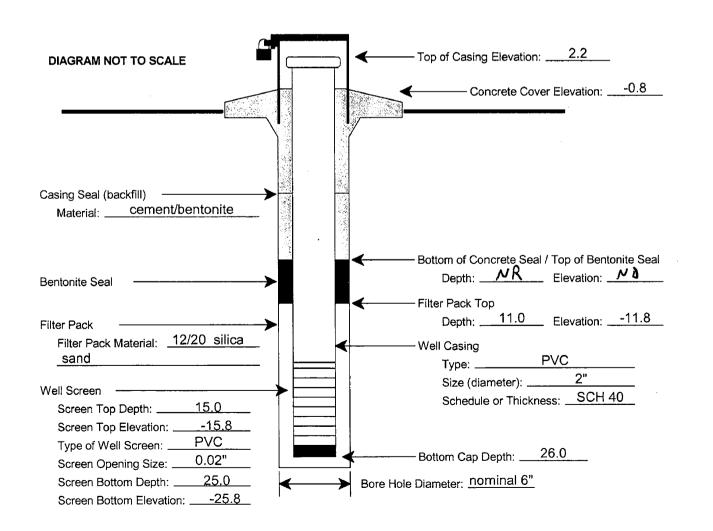
Geologist, Hydrologist, or Engineer Supervising Well Installation: Harry Lyatuu

Static Water Level Elevation (with respect to NAVD88) after Well Development: -2.4

Name of Geologic Formation(s) in which Well is completed: See boring log B-812

Type of Locking Device: Masterlock - 0536 Type of Casing Protection: Steel

Concrete Surface Pad (with steel reinforcement) Dimensions: 2'x2'x0.5'



Well Development Records

Well Dayslanment Percent		Well No.:
Well Development Record		ow-606L
Project No. 1948 - 07-1950	Logged By: Kin Chels-Snoth	
Cilent Name: Bechtel	Project Name: TP CoL	Checked By:
Well Installation Date: 5-4-08	Start Date: 4-23-08	Finish Date: 5-14-08
Well Development Date: 5-17-08	Start Time: 1002	Finish Time: 1132
Initial Water Level (ft.): 0,48' From	-TOC.	
Water Level during Initial Pumping/Purging		
Water Level at Termination of Pumping/Pu	rging (ft).: O. 68' Frons Tox	<u> </u>
Weather: 500ng ~ 80F		71
Height of Water Column: (ft.) x	9.16 gal./ft. (2 in.) 0.65 gal./ft. (4 in.)	- Hy 5-17-08 - See notes
	1.5 gal./ft. (6 in.)	Production of the N
	ga/i. (in.) =wvei	il ∀elume (gal./ft.)
Number of Time: Temper OC		proximate Turbidity uping Rate (NTU's):
	7 - 1 (98	al./min.):
	195 6.43 9129 13 03 7015 9.04 A	152
3) 78 22 1029 34	901 % ZOZ V 814 80°	1 107
4 104 and 1038 39	30 7.08 886 3	199x 104
5 130 32 1047 28	59 7,09 9.04	TOL
6)156 gd 1056 28.		<u>V</u> 20
7)162 04 1105 26.	Q 7.07 9.03 3.	I spor 8
(b) 108 gm. 1114 20	6 708 9.03 -	7 145-1
9) 234 or 1123 28.	59 7.09 9.03	1 23
10)200 30. 1133 26,	<u> </u>	
		•
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Notes: Sinced would	ing + Screen for en pry. Water is gray	tire 1st well
1 2 17 08 N	ions. water is Stafe	u/vey Fril Son
voine of whice per	7.0	•
Set peop in middle	0+ Ser - 0 Charl	Sor Hune Cla
- See well blune	Calculation Great Sheet	-
1/-		* ,
Well Developers Signature:	My-Suls	FIGURE 9

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Page 233 of 537

DCN# TUR512

	Well Dev	elopment F	Record					Well N	o.:
	Project No.CAL	2-1-2	-	Logged By:	V-	•		pw	1-606eU
	Client Name:			Project Nan		CoL	To	 Checked E	Bv.
	Well Installation D		<u>-</u>			ate: 4-22-08			e:4-22-08
	Well Developmen				Start Ti			Finish Tim	
•	Initial Water Level			Taving		1104		1111017 11111	
	Water Level durin				24' Fm	m TOC			
	Water Level at Te	rmination of Pu	mping/Pur	ging (ft).: 🛆	1.35	From To	X		
	Weather:	und i	759	F					
,	_	Q					<	see re	to
	Heigh	nt of Wa ter Colu. _ (ft.)	mn:		./ft. (2 in.) l./ft. (4 in.)		i/	See 15-1	عد
		_ ('")	^	1.5 gal./	II (8 in.)				
,				gal./ft	. (i	n.) =	_ Well	Volume (g	al./ft.)
w.ter			· ·						
below to e	Number of Well Volumes:	Time:	Temperat	ture:	pH:	Conductivity:		oximate	Turbidity
. 1	ven volumes.			_ _	٠ <i>٨</i>	mster		ing Rate	(NTU's):
0.24	(1) 13 2ml.	4110	27		114	12.0	5	spm	6.13
(2) 36 34	11/3	27,8	霜 士	극을	(3,0	2	MOC	2.6
العدم	4 52 901.	1119	744	科子		(3.3	5	on	1.43
0,24	15 Co gul.	1122	276	35 7	.14	63.4	5	m	124
. (678 5d.	1125	27.3	38 7	.15	43.7	5	mac	1.01
0.20	791 Sol.	1128	27.9	브 코	13	43.4	5 5	4	0.96
((8) 104-5-4	1131	38.0	길	19-	43.	ļ ———	pm.	0.50
0.20	1911752	1134	200	왕	.10	(3.4	59	m	0.75
0,20.	(10)130 gd.	1137	2010		10-	4312	2-	110	0.53
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	1 - 50	e will		<u> </u>				_ `	,
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	Mall Days's	ers Signature: .	Mana	II Im.	1. Du	b		F	IGURE 9
	vveii Develop	eis signature: .	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1	√				
	Graphics\Misc.\Forms					MACTEC	Engine	ering and	Consulting, Inc

Ø.						10/- 11	NI		
•	Well Deve	elopment F	Record			Well	i		
	Project No. CA-C			ed By: Kim C	holo-sur		U-CO21L		
	Client Name: Bedd Project Name: TPCd Checked By:								
	Well Installation Date: 4 - 18 - 08 Start Date: 4 - 17 - 08 Finish Date: 4 - 18 - 08								
	Well Development Date: 4-18-08 Start Time: 1335 Finish Time: 1505								
•	Initial Water Level	-			4/25-3-28	KK8-37	1000		
	Water Level (ft.): O' Artesian Flowing K\$5-3-8 K\$6-3-08 Water Level during Initial Pumping/Purging (ft).: O Actor Flower 0.80'								
	Water Level at Ter	rmination of Pu	mping/Purging (1): 0,000	3-08		`		
	Weather: 矣ດ	my ~ E	300F						
			_		5-3-08	LUX CO	e notes		
	Heigh	t of Water Colur		16 gal./ft. (2 in.)		0 36	2107		
		_ (ft.)		.65 gal./ft. (4 in.) 5 gal./ft. (6 in.)					
				gal./ft.	1.) =	_Well Volume	(gal./ft.)		
	•		· · · · · · · · · · · · · · · · · · ·						
tevel below TOC	Number of Well Volumes:	Time:	Temperature:	. pH: 54	Conductivity: MS/cm	Approximate Pumping Rate	Turbidity (NTU's):		
0.80	1)26 gal.	1344	28.62	4.00	553 563	(gal./min.): 3.0 29M	56.9		
0.80'	3 78 54	1402	28.21	7.07	57.0	3.0 spm.	11.8		
0.80'	5 30 24.	1420	28.20	712	576	30 00n 30 00m	5.23		
(7 182 gd	1438	28.33	7.13	57,9	30 9pm	3,90		
0.81	8) 208 gel.	1447	28.36	7.13	58.0	3.0 5 AV	3.52		
. (7) 234-2-1	1456	38.37	713	58.1	3,000	3.54		
0.80	10)2609-11	1505	28.17	7.13	<u>58, L</u>	3.00pn	3.04		
	Notes:	et Gre	ndfos	Approx.	a'about	e Soreo	napal		
	Sure	l well	L w/pu	mp to c	lean or	H SUM	ρ .		
	Compo	+ DUND	, A	7	•				
	- See w	rel Wil	me Calc	Water!	spreads h	eet for i	bline		
	Calco		. /	^1 -			÷ ,		
	Well Develope	ers Signature: .	Vruind (Jul-Sa		1	FIGURE 9		
	Graphics\Misc.\Forms			·	MACTEC	Engineering and	d Consulting, Inc		
	•								

	Well Development Reco	rd	Well No.:									
	Project No. (ALB-07-1950)	Logged By: Kin Uhrlb-Sneeth	ow-6214									
	Client Name: Bechtal	Project Name: TPCoL 4-18-08 Checked By:										
	Well Installation Date: 4-19-08		nish Date: 4-19-08									
	Well Development Date: 5 3-08		nish Time: 1/024									
	Initial Water Level (ft.):	5000										
	Water Level during Initial Pumping/Purg											
	Water Level at Termination of Pumping/Purging (ft).: 1.88											
	Weather: Sunny 280)°F										
	Height of Water Column:0.16 gal./ft. (2 in.)											
		perature: pH: Conductivity: Approx	ig Rate (NTU's):									
.86° (1) 13 00 1557 28	1.0+ +.1+ 549 5	oph 24.5 oph 12.5									
, 36'	3 39 24 (60) 38		m 8.13									
.88'	5/5 al 1/00 3		PM 6.67 PM 5.58									
	67831 1612 2		m 397									
.88'	7)9100 1615 21		au 3,59									
9	8)104 34 1618 29	776	19M 3.46									
001	9) 117 od. 1621 2 10130 gd. 1624 2	8.48 7.15 55.2 50	m 3.07									
'88,	[0] 30 gad. 1 1 2	0110 7.15 3317 39	m dil									
	5-3-08		•									
·			•									
	1 1	1 1	1									
	Notes: Set Grandfo	il pumping. me calculation sheets	n of well									
	Surged well with	ite pumping.										
	- See well value	me Coloute Pin Shootife	~ Valend									
	Calcs.											
		•										
	Well Developers Signature:	med Church Street	FIGURE 9									
	Troii poroiopois pigriature.		ing and Consulting, Inc									

		Well No.:	
	Well Development Record		ow-636L
	Project No. LACB-07-1950	Logged By: Kin Chales - Sningh	0w-426.
	Client Name: Real Las	Project Name: TOC-1 KEL C	necked By:
ļ	Well Installation Date: 4 -4 08 5		
	Well Development Date: 5-5-08		nish Date: 4-6-08 nish Time: 1138
	Initial Water Level (ft.): 2.16	Jount time. O (150) First	Mari Time: 1150
	Water Level during Initial Pumping/Purging	(ft): 3.971	
	Water Level at Termination of Pumping/Pu		
	Weather: Sunnl 2 840F		
	0		-08:
	Height of Water Column:	0.16 gal./II. (2 in.)	508 Secrotos
	(ft.)	0.65 gal./ft. (4 in.) 1.5 gal./ft. (6 in.)	
		gal./ft. (in.) =Well Vo	olume (gal./ft.)
suter lovel			,
on toc	Number of Time: Temper	ature: pH: Conductivity: Approx	timate Turbidity
W5500	Well Volumes:		g Rate (NTU's):
2.90	1)24 gul 1008 290	16 7.05 36.4 gal./r	
. (2)48 gel 1018 29	28 7.01 362 25	
4.12	372 04. 1028 29.3	34 7.05 36.4 3.00	
. 1	4) 9/ al 1038 29.	701 367 3.05	
4.10	5) 120 gal 1048 295	7.02 37.1 3.05 7.02 37.1 3.05	1
	7 169 21 1108 29 3	56 7.02 37.4 300	T
4.09	8 192 24 1118 29.	64 7.03 37.4 3.00	
1.00	9216 20 1128 29.	96 7,03 37,5 300	1 1
4.07	10)240gl. 1138 29.	(D) 7.04 37.7 3.05	em 0.84
7.00			<u> </u>
			•
			·
	Notes:		
	Sel oand	ros pung Approx 2° ak	son som
	and Sixal of Wel	Il with firm wound	fertist
	Volume.) C l -
		a Calculata Spreadshlet.	terwhene
	- See well south	ros penp Approx 2' at ill with firm runny necolculation spreadsheet.	
	calco.	(// 0 0	* .
	Well Developers Signature:	me Mul-one	FIGURE 9
	Graphics\Misc\Forms	MACTEC Engineer	ing and Consulting, Inc

	10/- II D	-l	Donound					Weil N	o.: ·		
	well Devi	elopment F	Kecora					AU	-636U		
	Project No.	8-07-19	50	Logged By:	Kin (hyles-5m	th	7			
	Client Name: 6		,	Project Nam				Checked E	Ву:		
	Well Installation D	Pate: 4-3-	08		Start Da	ate: 4-3-0	8 F	inish Dat	e:4-3-08		
	Well Developmen	t Date: 5-5	5-08			ne: 0906		inish Tim			
·	Initial Water Level	(ft.): 3.90	(ft).: 3.90							
	Water Level durin	·									
	Water Level at Te		·····								
	Weather: Sun	my ne	340F					 			
		of Water Colu		0.16 gal./			K	7 5-5	5-08		
	Heigh	0e-00	tes								
			•								
	gal./ft. (in.) Well Volume (gal./ft.)										
Nate.											
relow Toc	Number of Well Volumes:	Time:	Temperat	ure: p	Hi	Conductivity:	Pumpi	oximate ng Rate	Turbidity (NTU's):		
3,90	1) 10gel.	0906	247	_	03	46.9		min.):	3.13		
· · · · · · · · · · · · · · · · · · ·	(3) 30 gal.	100	27.0	5 6	95	422			0.85		
3,90	4 40 gal.	0912	276	2 6	99	42.6	0		150		
. (5) 60 ont.	0914	27	沙王	21	42.8	5	Som	0.72		
3.08	(6) 60 gal.	0916	273	311圣	00	42.8		<u> </u>	0.40		
ļ	70 gal	00118	27.a	生	<u>ूर</u>	13.8		 	O.Cot		
3 AQ1	18) 80 gal-	00120	137.5	불물		43.1	ļ,	1-1	0.91		
3,08	10 100 and	0922	272	十二季	<u>0</u> コ <i>0</i> コ	43.5	50	5PM	0.03		
•	100 100	_ 	87.5	- h - -	رحم	1000		415			
						***************************************		•			
								·			
				_	 '						
	'		i	Kit.	5-5-0	B	ŀ	V 1			
	Notes: So	of Gran	Hos	al al	e al	ove su	ng of	sol =	surged		
	well	with	gunp	runn	ing f	w first	VO	lyme-			
		, , 0 0 \	plume	calc	LI OH	in spre	rd S	hoot	ter		
	- Dee-			C == -	`	1					
	Notes: So Well - Sec Volume		•								
			. /	. ^ 1	^ -	<u> </u>			÷ ,		
	Well Dayeles	ers Signature: .	Ki	. Il Wart	Jun #			FI	GURE 9		
	vveii Develop	ers Signature: .)	<u> </u>			1 ·	D		
	Graphics\Misc.\Forms					MACTEC	⊏nginee	ring and (Consulting, Inc		

	Well Development Record		Well No.:								
	Project No(ALB-07-1950 Logge	ed By: Kim and Smuth	aw-706L								
	Client Name: Bechtel Project	ct Name: TR COL	Checked By:								
	Well installation Date: 3-22-08 to 3-25	-08 Start Date: 3-72-08	Finish Date: 3-25-08								
	Well Development Date: 4-30-08	Start Time: 1230	Finish Time: (420								
	Initial Water Level (ft.): 0.21 from Tox		· · · · · · · · · · · · · · · · · · ·								
	Water Level during Initial Pumping/Purging (ft).:	67 KX 4-30-0	8								
	Water Level at Termination of Pumping/Purging (ft).: 0.36 Jahow ToC Weather: SUNA 1750F 0.52 Water Column: 0.16 and /ft (2 in)										
		10 gai./it. (2 iii.)	25 50 100								
		65 gal./ft. (4 in.) 3 gal./ft. (6 in.)									
		gal./ft. (in.) =Wel	Volume (gal./ft.)								
TOC level											
boby Jev 2	Number of Time: Temperature:		roximate Turbidity								
1,07	Well Volumes:	l (no	ping Rate (NTU's):								
(, , ,	1) 2500 1245 29.84	7.06 41.0 25	5 9pm 2.17								
† ((3) 76 al 1310 2750	7.00 49.3 25	9m 0.75								
1,191	(4) 100 and 1320 37,62	18 99 52 25									
((5) 125 gl 1330 27.66	7.00 52.4 25	20M 0.80								
1 (91	(U)50 20 13A0 27.63	7.00 53.1 25	500m 0.56								
1.17	(7)175 gd. 1350 27.04 (8)20 gd. 1400 37.81	7.01 53.5 25	39M 0.73								
1.21	1925 al. 1410 2771		20M 0.44 20M 0.38								
(10250 gal. 1420 27.78		53PM 0.40								
`			···								
			·								
	Notes: Set Grandfos ~ 3	2' above bottom of	- well								
	Surged well while	tunnit pump unti	l worder								
	ran Clear, Approx. 5	-10 gallons.	•								
		5 - 2 ·	•								
	1	1	,								
	Well Developers Signature:	hel-Smit	FIGURE 9								
			poring and Computers 1=-								
	Graphics\Misc.\Forms		eering and Consulting, Inc								
	See well volume calc	whaten Spread The	t tov								
	Volume Calco.										

	Well Deve	elopment F	ecord	,				Well N			
	Project No. 646	8-07-19	50	Logged By:	Kno	hosmit	L		70CU		
	Client Name: 3			Project Nan				Checked E	By:		
	Well Installation D		8 to 3			ate: 3-26-08	2 1	Finish Date	3-27-08		
	Well Development		0-08			ne: 1509			inish Time: 1539		
-	Initial Water Level		From	- TOC	-						
	Water Level during	g initial Pumpin	g/Purging (ft).: , (08 k	way too	_				
	Water Level at Ter	mination of Pu	mping/Purç	ging (ft).:	.621	be low ?	يص	,			
	Weather: SUMY ~ 75°F										
	Height of Water Column: 0.16 gal./ft. (2 in.) See 10 to										
	H eigh	t of Water Colur (ft.)	πn:		./ft. (2 in.) l./ft. (4 in.)			<u>_</u> , S,	eenoteo 1		
		_ ('/		1.5 gal./	f. (6 in.)	-					
				gal./ft	. (ir	1.) =	Well	Volume (g	al./ft.)		
more too											
7	Number of	Time:	Temperat	ure:	pH: SiJ	Conductivity:		oximate	Turbidity		
i	Well Volumes:			1		ms/ca		ing Rate ./min.):	(NTU's):		
1.60	1) 11 gel.	1513	28.9	{	06	82.5	40	MIC	5.99		
1.72	22 34	1315	28:	<u> </u>	35	83.1		Som	33		
	3) 33 gl.	150	200		8/2	a) 4		Son	7.33 4.20		
1.76	(5) 55 gel.	1524	28:	25 6	.84	82.7) San	3.38		
1110	16)66 ml.	1527	28,2		.86	82.6		som	3.50		
1.76	7)77 gl.	1530	20.3		<u>.860</u>	82.3	50		3.18		
	(8)88 gd.	1533	27.8	5/4	<u>.84-</u>	82.7	50	SPM	2.71		
1.76	(9)99 32.	1536	124	1	80	00.6	1	Maga	1.80		
1.76	(10)1103x	1251	dtil	ec c	86	82.8	50	3000	1.0-2		
				- -			-	-			
							l				
			[{		[1	ĺ			
	Notes:	0 (C - a	0	210	المام	٠	C 1.			
	عاد ا	t Grund	402 P	north or	一一点	rom last	Driv.	-04 U			
	500	ed we		pump.	const	to unt	il (ester,	(ar		
	(140	a Approx	4,5	gallo	い 。						
	See	- well	solum	e cal	لتهادي	tim sore	ade	theet.	forvolune		
	Cal	.co.		_	•	V					
			12	0 01. 0	_	it)		FI	GURE 9		
	Well Develop	ers Signature:	Y min	J my							
	Graphics\Misc \Forms					MACTEC	Engine	ering and	Consulting, Inc		

	Well Dev	elopment F	Record					Well N		
	Project No. 640	18-07-19	50 Lo	gged By:	Kin (Indo-Em	vth		-721L	
	Client Name: Be			oject Name				T	Checked By:	
	Well Installation I	Date: 5-3-0	08	Start Date: 5 - 2 - 0 8 Fi					inish Date: 5-3-08	
	Well Developmer	nt Date: 5.4	F-08						e: 1337	
·	Initial Water Leve			·						
	Water Level durin									
	Water Level at Te									
	Weather: 500									
	Haid	nt of Water Colu	mn.	0.16 gal./	ft /2 in \		& ~08	See	notes	
	neigi	b								
		li Volume (a	al/ft\							
unfectend	gal./ft. (in_) =Well Volume (gal									
Frantoc 4.40/06	Number	WJOB	,							
4.40 4	Number of Well Volumes:	5 of Time:	Temperature	. \$	÷ ک	Conductivity:		proximate pring Rate	Turbidity (NTU's):	
193,408	123 92	140	29.38	7.	12	51.1		al./min.):	71000	
	3) 44 221.	1137	29.30		07	42.8	1	25 7M	146	
3.59	3) 69 50.	1147	29.30		26	42.0	2.3	25 504	106	
1	4)92 god.	1157	29.38		元	42.0	2.5	25 Day	86.8	
3.95	S/115 gad.	1207	29.45		<u> </u>	42.1	2.7	SOM	878.8	
	(4) 138 god.	1217	39.56 39.56		06 07	42.3	2.0	5 3m	72.4	
3.87	(8) 184 gal.	1237	29.35		05	42.9	2.5	25 -24	21.8	
	(9)207 21.	1247	29.30		25	42.8	2.5	S Jem	16.5	
3.87	(10) 230 gel.	1257	39.3	7.0	26	42.5	2.5	25.7m	<u> 28.9</u>	
((12) 2769-	1317	29.69	圣	25	42,5	2,=	5 spor	16:2	
	(H)3323 orl	1537	29.44	3 7 .0	25	42.5	2.5	32 26Wi	251	
				-				···		
,			ļ -	-			-			
										
	Notes:	04 (00	A C - A	200	~ \	1	٠			
	11,801	Lesses	atos A	MIOX	٠, ١	avove t	2UY	banc	1 Soyld	
	- See	WITK 1	10119.	_ 1	1 .1			101	1	
	- See	well (joleme 1	Carle	late	r Shill	t to	V VOIC	ne Calco.	
)		1				÷ ,	
	Wall Davelor	ers Signature: _	Kname	J (Jhu	J. J	mit		FI	GURE 9	
	vveii nevelop	iers Signature: -	1 ////	ر ر			.			
	Graphics\Misc.\Forms					MACTEC	⊏ngin	eering and (Consulting, Inc. —	

Volume 4, Rev 2 - 10/6/2008

	Well Development Record								Well No.:		
	Well Dev	elopment F	Kecord					oω	-721U		
	Project No. (A	08-07-19	150	Logged By:	Kim C						
	Client Name:	echtal		Project Nan		necked B	y:				
	Well installation D	Date: 5 - 2	2-08	Start Date: 5-2-08 Fin					nish Date: 5-2-08		
	Well Developmen		08						:1008		
•	Initial Water Leve	1 (ft.): 0.84	-								
	Water Level durin										
	Water Level at Te				.97						
	Weather:	sonry -	- 80°	3 Y							
ı	11-2-4	e not	<u>e</u> 0								
		nt of Water Coluing (ft.)	X	0.65 gal	/ft. (2 in.) ./ft. (4 in.)	5-4-08					
				1.5 gal./ft	(6 in.)	-	,	olume (ga	al /ff \		
				gai.//L	' \''				20,716.)		
waterlevel		54.08	1								
m Toc	Number of Well Volumes:	Time:	Temperat	ture:	oH:	Conductivity:	-Approx Pumpin		Turbidity (NTU's):		
1 01	in Wood	0950	27.		.69	410	(gal./i	min.):	54.8		
1.86	220 gal.	0952	28.0		200	42.4		ties	25.4		
,	(3/30 90)	0934	28.0	4 7	.03	42.3			14.2		
1.73	(4) 40 gal	0956	28.	在一子	.06	43.0	55	Pal	19.6		
	(5,50 34.	0958	283		05	4-3.	<u>_</u>	7	16.9		
1.50'	(6) (60 grd.	1000	28.8		08	43.3	23	pm	792		
1	8 90 and	1004	28.0	百一字	00	43.2	1		7.14		
1 401	9 90 and.	1006	28.0	5 3	07	43.0	53	on	6.3		
, , , , ,	119100 gal.	1008	28.9	36 7	.07	43.1	55	m-	5.03		
		<u> </u>									
			-					·			
	Notes: <	1 60	-16	= A00c		2'above	اما	<u></u> 1			
									Cot		
	well	1 4 20	ga	to c	1-egn	· 00+ S	2nd	?			
	- See	well	Volu	me c	الركا	later Sp	read	IShee	+ Cor		
	Volum	ne Cal	cs.		C	(•		
									<u>.</u>		
			12 -	, 1) 1	1 1			, , GURE 9		
	Well Develop	pers Signature:	Vn	my ()	my-	Smal		T1	GUNE 3		
	Graphics\Misc.\Forms					MACTEC I	Enginee	ring and C	Consulting, Inc		

	M/- II T	- l					Well	lo.:			
	Well Devi	elopment F	kecora				ow	-735L			
	Project No. 646	8-07-195	SO Lo	gged By: Kim (has snot			, 0 - 0			
	Client Name: B	echtel			COL		Checked I	Зу:			
	Well Installation D	Pate: 4-15-0	8 to 4	19-08 Start [Date: 4-15-0	නි	Finish Dat	Finish Date:4-19-08			
	Well Developmen	t Date: 4-2	1-08/4.	30-06 Start T				ie: 0932			
	Initial Water Level	(ft.): 6,34	-from To	<u></u>	429-0	8		430-08			
	Water Level durin						······································				
	Water Level at Termination of Pumping/Purging (ft).: TCC (Arterial) Weather: 500mg (Dorth Church 720)										
	weather:		•								
	✓ Heigh	at of Water Colu	TITI TO THE TITLE OF THE TITLE	0.16 gal./ft. (2 ln.	Kg-30	-08	See r	wles			
	- Torga	_ (ft.)	x	0.65 gal./ft. (4 in.			_				
	1.5 gal./ft. (6 in.) = Well Volume (gal./ft.)										
water level	Number of	Time:	Temperature	, <u>p</u>	Conductivity:	Ann	roximate	Turbidity			
	Well Volumes:	11110.	oC Temporature	: pH: SU	m5/em	Pum	ping Rate	(NTU's):			
0.83	10 25 gol	1430	29.51	6.43	62.8		il./min.):	25.3			
1	2) 50 gl	1440	29.44	4.64	62.5	ब्र	.5 5PM	14.4			
(3) 75 gl	1450	39.31	6165	12.6		.5 opm	9.95			
0011	4) 100 gd.	1500	29,19	1.65	122		5 9PM	9.59			
0.84	1150 21	1520	787	10.00	(2)	· 즉	5 opn	7,26			
4	7175 grl.	1530	28.72	10.65	622	2	5 spm	7.45			
\(\frac{1}{2}\)	8)200 gal	1540	28.7	60.66	62.5	2.	5 spm	624			
0.651	9)225 24	923	27,38	4.65	79.0	3	5.00M	8.21			
(10250 34	0932	28.41	Colot	82.9	di	5 30/1	4.42			
							· .				
						-	7.				
•				-							
	}			!	1	I	1				
	Notes:	(- 1	C - 0×	0 -11	^	ſ	_				
) Sex	· Gand	tos por	P ~ 2'1	ung 1907	Azn	~ af u	nell			
	tag	gd TI). Durg	edwellu	1/fump a	md	lower	eal			
	PLIA	P to cl	egn ov	f Sedine	/ ,						
	Cons	leted w	ell Dav	edwell u of Sedines expression 4	Volumes	1+	10 on	4-30-08			
	due	to Thon	clent 10	in on 4	27-08	•					
		ers Signature:		lul-Sn				GURE 9			
					MACTEC	Engina	erina and I	Consulting Inc.			
	Graphics\Misc.\Forms	, 1 1	~ ^	1 1	_			Consulting, Inc. —			
	see u	iell Valen	u Calc	Watn 5	heed tar	Val	und Co	uco.			

	Well Dev	elopment F	Record					Well N	1-735U		
	Project No. (A)	08-07-19	50	Logged By:	Kinc	halo-Smid	1		TD54		
	Client Name: B			Project Nar				Checked E	Ву:		
	Well Installation D		08	•	Start Da	Finish Date: 4-20-08					
	Well Developmen		29-08	3	Start Ti	Finish Tim					
·	Initial Water Leve	l (ft.): ス. o´	from	TOC							
	Water Level durin					x -2.00	<u> </u>				
	Water Level at Termination of Pumping/Purging (ft).: 2.03' Weather: 500M, ~750F										
	Weather: 500	m, ~ 7	50+								
	Heigh) it of Water Colu	mn:	0.16 asi	./ft. (2 in.)			> See	; Te 5		
	- Teigi	_(fL)	×	0.65 ga	41n.)			100			
				7.5 gal./fi gal./fi	ft. (8 in.) i. (ir	n.) =	Wel	i Volume (g	al./ft.)		
				9				(3	—····,		
برناعد لعداد	Number of Well Volumes:	Time:	Tempera	iture:	pH: SiJ	Seenote Conductivity:		roximate	Turbidity (NTU's):		
NOTICE TO	1.,	1130,200	70		·	HI 470-00	(ga	ping Rate	· · · ·		
2.03	1 (10gml.)	14	20 3	為一名	177	40 / A Zan	1 _	ocan	17.7		
	2 (20 gd.)	156	30.	31 10	88	100.5	3	5 apm	7.96		
	4 (40 grl)	1200	29.5	25 6	48	100.4	a	50m	5.82		
2.04	5 (500ml)	1335	29.3	FO 6	73	61.7	2.	5994	2.7		
•	(0 (60gal.)	1339	333	5 4	77	62.0	3.0	Dopm	4.34		
2.021	7 70 20	1347	29.7	7 6	78	(12.5	生	mac c	8.80		
	8 (80 grd.)	1350	397	31 10	80	12.7	4	5 90M	841		
.031	10100 grd.	1353	290	13 6	81	62.5	4.5	SPM	8.20		
							 				
											
	Notes:				- ,	١ .			_		
	- Grano	lfos pur	p Set	- Approx	c inche	\$ 2.0' of	1	potton			
	1 7	1				~					
	- 511 ree	d well.	For fo	rist 3	val.	by turn ten	ميم د	ott br	inf		
	and	allowing	`well	l to 5	ettle	- Hin-	tur	à on 1	punp		
	ngar	٥. ١	٠		. O . A	proxing	Kp 3	50 97	C. ,		
	- Lougra	1 bout to	1/ -11	LOF WE	₹ .++	· · · · · · · · · · · · · · · · · · ·	U		GURE 9		
	Well Develop	ers Signature: .	1) mil	1 cmy-	ony	Aproxind		F 1			
	Graphics\Misc.\Forms					MACTECT	Engine	enng and (Jonsulting, Inc		
	note: los	0 - 00/0	Day i	with Co	eteritor	Jeth bust	0	bean 1	250/200.		

rote: had a problem with conductivity hasto cream problem.

First fow two conductivity rendings not valid.

*84-21-08

Volume 4, REPZ-10/6/2008LL volume College/24-tots37 Sheet For Well Volume Grasses.

	Well Dev	elopment F	Record					weiln	10.:	İ	
				Longod B			7	ou	1-802L	-	
	Project No. Client Name:		50	Logged B	ame: TP	Inds-Sau	4/~	Checked B		\dashv	
			- C	Projectiva			<u> </u>	Finish Dat	· · · · · · · · · · · · · · · · · · ·	\dashv	
	Well Installation D									싀	
•	Initial Water Level				Start II	me. 1431		rinsn tim	e: 1631	\dashv	
	Water Level durin			,	コエ					ㅓ	
	Water Level at Te						ㅓ				
					<u></u>					ᅱ	
ı											
ļ	Height of Water Column: 0.16 gal./ft. (2 in.)										
	gal./ft. (in.)Well Volume (gal./										
interleval			1			1		<u>-</u>		4	
am toc	Number of	Time:	Tempera	ture:	pH:	Conductivity:		proximate	Turbidity		
	Well Volumes:		oc	\sim	su	mscm		iping Rate	(NTU's):		
0.77	1) 24 of	1501	29.3	7 4	0.86	499		MAEC	0.49	-	
_ 1	40 and	1501	200		2.88	50.5	—		042		
0.81	3) 12 Ja.	1525	20	3 /	93	50.7	—		0.32		
	5120 20	1533	29.3	3 7	196	517		V	044		
0.86	6)144 gd.	1541	289	王儿	0.95	51.8	3.	MACC	0.29		
	7)168 gd	1549	28.7	4	295	524		1	077		
0.87	819234	100+	20.0	육 4	2.515	5).6		1	0.55		
0.89	10 240 and	1/4/3	28.6		94-	578	3	OOPM	0.36		
0.0	() and offer	1621									
		KY 5508]	• -			
				_							
				- -							
•			l ——								
	Notes:	'	· ~			, i -1 a	٠ _	o` =•			
	5	urged E	o dure	0/ 2/	indici	5 while	Th	ر مرار کر م	5) tov		
	First.	well v	pline	o vo	naveo	k .	_	1\ .	and Car	į	
	- 5	e wel	(Val	me.	Calca	datan S	Prei	ud Sh	US TOU		
		me Cr	lcs.			l. datoù Si					
		- - ·		Λ.	,						
			12.	m/lle	1-9.			-	CHREA		
	Well Develop	ers Signature: .	Vnus	<u>mjth</u>	W Su	////		Fi	GURE 9		
	Graphics\Misc.\Forms				 	MACTEC	Engin	eering and	Consulting, Inc.	. —	

/	Well No.:
	Well Development Record
	Project No. 6468-07-1950 Logged By: King Onlo Smith
	Client Name: Bechfel Project Name: TPCoL Checked By:
	Well Installation Date: 5-4-08 Start Date: 5-4-08 Finish Date: 5-4-08
	Well Development Date: 5-7-9 Start Time: 5-7-9 Finish Time: 14-13 with
	Initial Water Level (it.). 4.10 67 3-4-08
	Water Level during initial Pumping/Purging (ft).: 21072.64 1455 ¥857-08
	Water Level at Termination of Pumping/Purging (ft).: 2.49 Weather: 5,004 - 855
	Height of Water Column: 0.16 gal./ft. (2 in.) (ft.) x 0.65 gal./ft. (4 in.) Vel 5-7-08
	1.5 gal./ft. (6 in.) Well Volume (gal./ft.)
water land	
FOR TOC	Number of Time: Temperature: pH: Conductivity: Approximate Turbidity
	- Well Volumes: OC SU MS/cm Pumping Rate (NTU's): (gal./min.):
2.64	1) 10 ml 14355 2897 6.36 665 5 spm 4.42
	2)20 gal. 14357 28.68 6.70 68.6 V 2.49
2.65	3)30 pd. 14359 28.66 6.75 69.8 5 5pm 1.87
2.45	5150 gr. 151403 28:58 6:77 70:3 V 1.76
	1/10 and 161405 2670 Te75 706 5380 125
2.67	717091. 151407 28.68 6.81 70.7 1.19
2.67' 2.68' 2.68'	8 180 gal. 1514-09 28.70 4.82 71.1 V 1.16
2.60	9/90 od. 15/4-11 28:69 6.82 71.1 5 spm 1.06 10/100 sl. 15/4/3 28:71 6.82 71.3 5 spm 0.82
2.68	10 5 STATE STA
•	The state of
	Notes: Surged Sump with Grandos For i strolune until water van chear.
	until water van Cheak.
	- See well vokme colculation spreadsteiter
	volune colos.
	Well Developers Signature: Signature: FIGURE 9
	Graphics\Misc.\Forms MACTEC Engineering and Consulting, Inc.

	Well Dev	elopment F	Record					Well N	o.: -809L
	Project No.LAC	8-07-PA	56	Logged By:	King	hole-sn	ush		
	Client Name:			Project Nam		Checked E	By:		
	Well Installation [Date: 5-0-	7-08	<u> </u>	Start D	Finish Date	e:5-7-02		
	Well Developmen				Start Ti	Finish Tim	e: 1507		
	Initial Water Leve	1(ft.): 3.3(,						
	Water Level durin	g initial Pumpin	g/Purging	(ft).: 3,92	וֹגַ				
	Water Level at Te			ging (ft).: 3	44				
	Weather: 50	nm 2 8	5°F						
		0				KY	13-1	na Sek	1 1040
	Heigh	nt of Water Colu (ft.)	mn: X	0.16 gal. 0.65 gal	tt. (2 in.) /ft. (4 in.)		150		
				1.5 gal./ft	(6 in.)	n.) =	Mo	ll Volume (g	ol /ft \
				yai./it.		() -	_ vve	ii volume (g	al./it.)
			<u> </u>						
	Number of Well Volumes:	Time:	Tempera	ture: p	H:	Conductivity:		proximate pring Rate	Turbidity (NTU's):
397	13 23 and	1346	31.3	_ {	Z 1	425	(ga	al./min.):	13.3
3,92° 3,494° 3,494°	2) 46 gml.	1355	29.7	6 70.	66	40.8	4 .I	7.41	7.47
3,45,1320	3) (8) ral.	1404	29:	78 Lau	£	41.1		V	5.3
*194'	4)92 gal	1413	39.0	0 10	68	41.5	2	B opm	3.83
34/5/308	5)115 g-2	1422	33	75 19.	70	418	l	1	2.96
A:95	6)1389	1431	न्यान	16 91	头	127			3.45
	0104-01	1249	39:	74	77	43.0		1	529
3.921	9)20791	1458	29.9	31 6	73	43.3	2	8 agri	2.06
Oi len	10)2809-1.	1507	39:	77 6	72	43.3			2.05
			l						
			l ——				-	·•	
_							-		
							-		
	Notes:		15-13-	18 P8 5-1	3.00 O-C	0 116	·	10	remove
		surgeon	SION	or how	P SL	2 C C	·W	04051	to remove
	Solimons	r, set (mark	1~ m	wolf	COT 3	&	een q	nos
	remer.	ed 10	we	ll Voh	nec). . l		. 101	. 10
	- See	e well	Volu	ne Ca	la	later 5	V/C	ach 3 L	eex 40V
	Voken	e Cal	ca	\mathcal{M}	Λ -			•	
			V -	$\mathcal{M}(\mathcal{V}_{\mathbf{A}})$), Q.	de			OUDE O
	Well Develop	ers Signature: .	Mu	- OVN	1-500			FI	GURE 9
	Graphics\Misc.\Forms					MACTEC	Engin	eering and (Consulting, Inc. —

	Well Dev	elopment F	Record			Well				
	Project No. 64	68-07-1	750 Logg	ged By: 📈	in Clark-Sm	in ou	1-809U			
•	Client Name: 3			ect Name:	real	Checked	Ву:			
	Well installation D	Date: 4-1-0	28	Sta	art Date 4-1-08	Finish Dat	te:4-1-08			
	Well Developmen		-08		art Time: 0844		ne: 0910			
•	Initial Water Leve	(ft.): 2.7	91							
	Water Level durin	g Initial Pumpin	g/Purging (ft).:	3,921						
	Water Level at Te	rmination of Pu	mping/Purging (ft).: 2,6	21					
	Weather: ろいん		73°F							
		0				Seen	معار			
	Heigh	of Water Colum		.16 gal./ft. (2		KY 5-17	٥٥			
	1.5 gal./ft. (6 in.)									
				_gal./ft. (in.) =	Well Volume (g	gal./ft.)			
.1- 10										
on toc	Number of	Time:	Temperature:	pH:	Conductivity:	Approximate	Turbidity			
	Well Volumes:		oc.	SH:	ms/cm	Pumping Rate (gal./min.):	(NTU's):			
3.921	1) 10 gd.	0847 0850	26.80	6.9	3 65.8	4.0 50M	1.86			
2.99'	3) 30 gd.	0853 0856	29.29	6.99	68.9	4.0 9pm 4.0 5pm	1.53			
29.81	5)5054	0859	<u> </u>	6.97	68.8	4.05pm 5.09pm	1.48			
298'	7)70 rd.	0902	29.43	7.00	189	5.00m	0.63			
	(8) 80 5d	0906	29.04	至	2 68.8	5.09pm	0.92			
298'	10)100 Sel.	0910	39.18	70	0 68.6	5.0 9PM	1.58			
										
					_					
·					_					
	Notes:-5	ured u	Jell i	th	Grandfo:	5 to re	more			
	Sed	inent f	rombo	Hor.	of well					
	- 500	الددا .	l wolon	e cal	loulation	Sheet t	izv			
	Volu	ne ca	lco.							
			1							
	Well Develop	ers Signature: .	Knaul	luf &	A L	F	IGURE 9			
	Craptical Miss / Forms		<u> </u>		MACTEC	Engineering and	Consulting, Inc			

	10/-11/7	-1							Well N	lo.:
	well Dev	elopment R	recond						nu	1-812L
	Project No. Le 4C	8-07-195	0	Logge	d By: ⊀	inc	hade-Snut	L		
	Client Name: B	echtel		Projec	t Name:				Checked I	Зу:
	Well Installation D	Date: 5-6-7	38 Fg	5-13-08 Start Date: 5-6-08 F.				Finish Dat	e: 5-7-08	
	Well Developmen		3-08				me: 1010		Finish Tim	
•	Initial Water Level	(ft.): 1,46	<i>-</i>							·
	Water Level durin	g Initial Pumping	g/Purging	(ft).: \	190	1				
	Water Level at Te			ging (ft)	<u> </u>	<u> </u>				
	Weather: อีบก	12 - E	OF							-
	Height of Water Column:0.16 gal./ft. (2 in.) 5-13-08									
i	(π.) V.65 gal./π. (4 in.)									
	1.5 gal./ft. (6 in.) gal./ft. (in.) = Well Volume (gal./ft.)									
	gaine (gaine)									
	No. and and					1	M 5-13-8		, ,	
	Number of Well Volumes:	Time:	Tempera OC	ture:	PH: -SU	, [Conductivity:	Pum	proximate ping Rate	Turbidity (NTU's):
1.90	1) 23 and	1024	31.7	-4	65	7	1861 43.6	(gi	al./min.):	0.75
1, 10	2 46 oct	1032		这	6.8	4	42.0			1.23
1.85	3) 10 90.	1040	31.0	21	6.8	王	42.5			0.80
المما	4)92 2	1048	30.	78	4.8	4	42.2	-	<u>V</u>	0.58
1.85	5) 115 201	1056	30,0	13	6.8	<u>\$</u>	42.2	<u> </u>	09pm	0.43
1.86	7) 1/01 and	11/12	30.0	33	100	<u>9</u>	42.6		 	0.58
	8)184 grl.	1120		站	6.4	36	42.7		1/	0.64
1,851	9) 207 grl.	1128	30.	扫	6,8	1/2	42.8	3	MCO	0.66
	10)230 gal.	1136	30.0	<u>eo</u>	6.8	<u>5.</u>	42.7		¥,	0.51
									···	
				—					<u> </u>	
	Notes:	used us	008	54 m.	0 (1)	ich	arund		10 ra	enoul
	Sedine	uned w It sett	S Ga	1300	fo5	Own	$\rho \approx 50$	آ ال	cen o	end
	renove	el Torie	reel	اص	ine	b.	V			
	-500	. well	VOL	ne.	Cal	cil.	An Sp	rea	Ishee	+to
	Volum	e Cal	، هو		_		·			
	-)	,	\wedge \wedge	N \(\sigma	1			
			1/-	.01	1 X.,	V X	Link			IGURE 9
	Well Develop	ers Signature: _	* mu	7	Vive	1-	2,00		1 -1	GUILE 3
	Graphics\Misc.\Forms						MACTEC E	Engin	eering and	Consulting, Inc

	Well Developmer	t Record				Well No.	. 1
							8124
	Project No. 6468-07-	1950	Logged By: .	` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	de_Sout		
	Client Name: Bechte		Project Name		Checked By		
		7-08		Start Date: 5	-7-08	Finish Date:	
	Well Development Date: 5			Start Time: \	333	Finish Time:	453
	Initial Water Level (ft.): 2.3			· · · · · · · · · · · · · · · · · · ·			15 15 Act
	Water Level during Initial Pur)	·		
	Water Level at Termination of Weather:		 	15			
	Weather: Scanny.	W 8500		······································	A,	0-0-1	=00
	Height of Water	Alumn.	0.16 gal./ <u>f</u>	+ 12 in	KI.	e not 5-7-08	
	(ft.)	*	0.65 gal./	ft. (4 in.)	٠.٧ ع	5-7-08	
			1.5 gal./ft. gal./ft. (We	il Volume (gal	./ft.)
4 · A				·/		(9-	
trantoc	Management					, ,	
	Number of Time: Well Volumes:	Tempera				proximate pring Rate	Turbidity (NTU's):
~ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1) 10 och 1335	14/5/7	1-08	80 7		al./min.):	5.08
2.68	2)20 al. 1337	32.4	1/2	19 7	6.0 67	spm -	2 30
	3) 30 gal 133°	320	0 6.8	50 7	7.6		1.89
276	4)40 and 1341	33.0		30 MY 7	7772	V.	1.26
2.78	5 50 gal. 134	3 33.	<u> 28 (o.</u>	3 3	7.6 5	gpm .	0.80
2.78	6 60 gal. 34	$\frac{5}{3}$		월_ - 폭	75 -		0.83
~ -m	7) 70 gal 674 34	2 23.0	1	32 3	79 -	1-	0.78
2.79	8) 20 oct 12 125	1 22	7 (0.5	$\overline{2}$	7.7 5	9PM	0.67
2.801	10)100 al 13195	3 33	10 (0.	81 - 7	学年 三	2001	051
	WX57-08	2					
						•	
		_				· .	<u></u>
						.	
		-					
	1	i	1	ŀ	ŀ	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
	Notes: Until Surged	SUM	2 with	- 950r	ulfos -	tar 13	rolul
	DATE	notor v		ook,	•		
	KV 5-7-08		7 01.	<i>- در</i>		101	
	Ky5708 - See we	el vol	ine C	lechato	~ Spren	2) Sheet	400
	128 miles	. calo	<u>.</u>				
	57-00		o 1	n n	n		÷ ,
	Well Developers Signatur	. K.	mel Chri)-Live	\bigcirc	FIG	URE 9
	vveii Developers Signatul	cr_pan		Y	_		
	Graphics\Misc.\Forms				MACTEC Engin	eering and Co	onsulting, Inc. —

Well Sampling Records



OBSERVATION WELL SAMPLING WORKSHEET

OBSERVATION WELL ID: OW-606U				MA	6468-0	7-1950		
PROJECT: Turkey	Point COL Pro	oject	SITE:	Florida City, Florida			DATE:	5/28/2008
MEASURED WELL DEPTH: 31.91	FT.	SCREENED	INTERVAL:	18-28	FT.	WELL DIA	AMETER:	2 IN.
HEIGHT OF MEASURING POINT	ABOVE LAND	SURFACE:		3.0	CASING M	IATERIAL:	P¹	VC
SAMPLING DEVICE:		See below		TUBIN	G TYPE:	Dedicate	ed, Disposable	Tubing
MEASURING POINT:		Top of Casing		DEPTH	TO GROUND	WATER:	2.71	
SAMPLING PERSONNEL:		L. Bisson		WATE	ER-COLUMN H	EIGHT:	29	.20
STEEL GUARD PIPE AROUND	CASING:		$\overline{\mathbf{V}}$	YES		NO		
LOCKING CAP:			$\overline{\mathbf{Q}}$	YES		NO		
PROTECTIVE POST/ABUTN	ÆNT:			YES	V	NO		
NONPOTABLE LABEL	•			YES		NO		-
ID PLATE:	-			YES		NO		
WELL INTEGRITY SATISFAC	CTORY:		$\overline{\mathbf{Q}}$	YES		NO		
WELL YIELD:			$\overline{\mathbf{Z}}$	HIGH		MODERATE		LOW
COMMENTS	nersible pump,	Horiba U-22 S	N MO15-09.					
	Purge volume	determined by	multiplying w	ater-column he	ight by 0.16 gal/	ft for a 2-inch w	'ell	
PURGE VOLUME PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	TES
(gallons) (gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	140	1123
12.2 0.4	28.66	6.86	1.65	66.7	2.00	-355		
26.2 0.4	28.70	6.88	1.55	66.9	0.39	-368		
32.6 0.4	28.70	6.84	1.61	66.8	0.46	-339		
39.0 0.4	28.71	6.84	1.66	66.9	0.30	-342		
45.4 0.4	28.71	6.84	1.64	66.9	0.34	-347		
Sample 0.3	28.71	6.84	1.66	66.9	0.34	-344		
								_
Sample collected a	at 16:10 for the	following tests						
				<u> </u>				
		160.1 / Alkalinit		.1				
		rate/Nitrite - Me	thod 300.0				·	
	Cations - Metho							
	Ammonia - Me							
	Kd - distributio	n coefficient						
	1	ļ						
	<u> </u>			ļ				

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: LL Date: 7-7-08

Checked by: CBS Date: 7/7/08

MACTEC Engineering and Consulting, Inc. Raleigh, NC



MACTEC Engineering and Consulting, Inc. 3301 Atlantic Avenue

Raleigh, North Carolina 27604

					OBSERVATION WELL SAMPLING WORKSHEET					
OBSERVATION W	ELL ID:		OW-606L		MAG	CTEC JOB NUM	fBER:	6468-0	07-1950	
PROJECT:	Turkey	Point COL Pr	oject	SITE:	Fl	orida Cirty, Flo	rida	DATE:	5/28/2008	
MEASURED WELL DEPTH:	. 111.31	FT.	SCREENED	INTERVAL:	97-107	FT.	WELL DIA	METER:	2 IN.	
HEIGHT OF M	EASURING POINT	ABOVE LANI	SURFACE:		2.8	CASING N	IATERIAL:	PVC		
SAMPLING DEV	ICE:		See below		TUBIN	G TYPE:	Dedicate	d, Disposable	Tubing	
MEASURING PO	INT:		Top of Casing		DEPTH	TO GROUND	WATER:	2.30		
SAMPLING PERSONNEL: K. Ch.			K. Charles-Sm	iith	WATI	ER-COLUMN H	EIGHT:	10	9.01	
STEEL GUA	RD PIPE AROUND	CASING:		V	YES		NO			
	LOCKING CAP:			$\overline{\mathbf{A}}$	YES		NO			
PROTEC	TIVE POST/ABUTI	MENT:			YES	\square	МО			
NO	NPOTABLE LABEI	<u>.</u> :		V	YES		NO		•	
	ID PLATE:			V	YES		NO			
WELL INT	EGRITY SATISFA	CTORY:		V	YES		NO			
	WELL YIELD:			V	HIGH		MODERATE		LOW	
COMMENTS	nersible pump,	Horiba U-22 S	/N MO15-09.							
		Purge volume	determined by	multiplying w	ater-column he	ight by 0.16 gal	ft for a 2-inch we	ell		
				··						
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	ИC	TES	
(galions)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	1.0	120	
26	0.4	28.78	7.41	10.02	52.6	1.22	-306			
52	0.4	28.32	7.09	9.57	52.8	0.61	-365			
65	0.4	28.38	7.08	9.89	52.9	0.91	-367			
78	0.4	28.14	7.09	9.98	52.7	0.74	-370			
91	0.4	28.09	7.08	9.84	52.7	0.83	-370			
Sample	0.3	28.29	7.08	9.92	52.8	0.77	-370			
<u> </u>										
<u> </u>										
	Sample collected a	t 15.40 for the	following tasts							
	Sample Collected 2	11 13.40 101 1116	londwing tests							
		Analytical Met	hod							
		TDS - Method	160.1 / Alkalinit	y - Method 310	.1					
		Anions and Nit	rate/Nitrite - Me	thod 300.0						
		Cations - Meth	od 6020							
		Ammonia - Me	thod 350.1							
		Kd - distribution	n coefficient							
	1									

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: LS Date: 772/08

Checked by: CBS Date: 7/7/08



OBSERVATION WELL SAMPLING WORKSHEET

					\		DDD OITHIN DA	10 11 0141011	
OBSERVATION WE			OW-621U		MA	CTEC JOB NUM	IBER:	6468-0	7-1950
PROJECT:	Turkey	Point COL Pr	oject	SITE:	F	lorida City, Flor	ida	DATE:	5/29/2008
MEASURED WELL DEPTH:	32.36	FT.	SCREENED	INTERVAL:	17.4-27.4	FT.	WELL DIA	METER:	2 IN.
HEIGHT OF ME	EASURING POINT	ABOVE LAND	SURFACE:		3.30	CASING M	IATERIAL:	P'	vc
SAMPLING DEVI	CE:		See below		TUBIN	G TYPE:	Dedicate	ed, Disposable	Tubing
MEASURING POI	NT:		Top of Casing		DEPTH	I TO GROUND	WATER:	5.	.23
SAMPLING F	PERSONNEL:	-	K. Charles-Sm	ith	WAT	ER-COLUMN H	EIGHT:	27	7.13
STEEL GUAI	ND PIPE AROUND	CASING:		V	YES		NO		
I	OCKING CAP:			V	YES		NO		
PROTECT	IVE POST/ABUTM	MENT:			YES	Ø	NO		
ИОИ	POTABLE LABEL	:	-	$\overline{\Delta}$	YES		NO		
	ID PLATE:			V	YES		NO		
WELL INTI	EGRITY SATISFAC	CTORY:		<u> </u>	YES		NO	· · · · ·	
	WELL YIELD:			<u> </u>	HIGH		MODERATE		LOW
COMMENTS		Monsoon subr	nersible pump,			·			
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well									
						<u> </u>		······	
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	TES
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	NO	TES
12	0.4	27.81	7.16	0.07	92.6	21.8	-306		
24	0.4	27.82	7.10	0.05	90.6	3.72	-342		:
30	0.4	27.81	7.08	0.05	90.9	2.93	-349		
36	0.4	27.81	7.08	0.05	91.0	2.89	-351		
42	0.4	27.83	7.07	0.05	91.1	2.90	-350		
Sample	0.3	27.82	7.08	0.05	91.0	2.91	-351		
	ClN4-2	416:10 6: 41 :	Callandina Acces						
	Sample collected a	t 16:10 for the	Tollowing tests						
		Analytical Met	hod	· · · · · · · · · · · · · · · · · · ·	 				
		r interpretar 1410c	1						
· · · · · · · · · · · · · · · · · · ·		TDS - Method	160.1 / Alkalinit	y - Method 310	.1				
	1		rate/Nitrite - Me						
		Cations - Meth	od 6020						
		Ammonia - Me							-
		Kd - distributio	on coefficient						

Observation wells purged in accordance with ASTM D-6452-99

repared by:	ash	Date:	7-7-08		
	~ ~ ~		-1-1		

Checked by: <u>CBS</u> Date: <u>7/7/06</u>



OBSERVATION WELL SAMPLING WORKSHEET

					OB.	SERVATION W	ELL SAMITLIN	IG WORKSHI	FE1	
OBSERVATION W	ELL ID:		OW-621L		MAG	CTEC JOB NUM	IBER:	6468-0	7-1950	
PROJECT:	Turkey	Point COL Pro	oject	SITE:	F	orida City, Flor	ida	DATE:	6/4/2008	
MEASURED WELL DEPTH:	111.55	FT.	SCREENED	INTERVAL:	98.6-108.6 FT. WELL			METER:	2 IN.	
HEIGHT OF M	EASURING POINT	ABOVE LAND	SURFACE:		3.0 CASING MATERIAL:			PVC		
SAMPLING DEV	ICE:		See below		TUBING TYPE: Dedi			ated, Disposable Tubing		
MEASURING PO	INT:		Top of Casing		DEPTH TO GROUNDWATER:			3.50		
SAMPLING	PERSONNEL:		K. Charles-Sm	ith	WAT	R-COLUMN H	EIGHT:	108	.05	
STEEL GUA	RD PIPE AROUND	CASING:		\blacksquare	YES		NO			
	LOCKING CAP:			\blacksquare	YES		NO		_	
PROTEC	TIVE POST/ABUTM	MENT:			YES	V	NO			
NO	NPOTABLE LABEL				YES		NO			
ID PLATE:				$\overline{\mathbf{Z}}$	YES		NO			
WELL INT		\square	YES		NO					
WELL YIELD:				$\overline{\mathbf{Q}}$	HIGH		MODERATE		LOW	
COMMENTS	nersible pump,	Horiba U-22 S	/N MO15-09.							
Purge volume determined by multiplying water-column height by 0.16 gal/ft for a 2-inch well										
		***		'						
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	TES	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(m\$/cm)	(NTU)	(± mV)		TE5	
26	0.4	27.74	7.07	1.68	>99.9	0.31	-353			
52	0.4	27.72	7.06	1.67	>99.9	0.34	-352			
65	0.4	27.81	7.05	1.66	>99.9	0.20	-347			
78	0.4	27.81	7.06	1.66	>99.9	0.21	-347			
91	0.4	27.81	7.06	1.66	>99.9	0.21	-349			
Sample	0.3	27.80	7.06	1.66	>99.9	0.21	-349			
	Sample collected a	t 14:20 for the	following tests							
	Sumple concetes o	1 1 1 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1	l l l l l l l l l l l l l l l l l l l							
		Analytical Met	hod							
		TDS - Method	160.1 / Alkalinit	y - Method 310	.1					
			rate/Nitrite - Me							
		Cations - Meth								
	 	Ammonia - Me								
		Kd - distribution								
	 						<u> </u>	·		

Observation wells purged in accordance with ASTM D-6452-99

repared by:	inst-	Date: アーチャ	ঠ
repured by.		Dutc	<u>-</u>

Checked by: <u>CBS</u> Date: <u>7/7/08</u>



OBSERVATION WELL SAMPLING WORKSHEET

					OBSERVATION WELL SAMPLING WORKSHEET						
OBSERVATION	OBSERVATION WELL ID: OW-706U						MACTEC JOB NUMBER: 6468-07-1950				
PROJECT:	Turkey	Point COL Pa	roject	SITE:	Florida City, Florida			DATE:	5/29/200		
MEASURED WELL DEPTH	I: 31.72	FT.	SCREENED	INTERVAL:	17-27	FT.	WELL DIA	METER:	2 IN.		
HEIGHT OF	MEASURING POINT	ABOVE LAND	SURFACE:		3.2	CASING N	MATERIAL:	P.	VC		
SAMPLING DI	EVICE:		See below		TUBIN	G TYPE:	Dedicated	d, Disposable	Tubing		
MEASURING :	POINT:		Top of Casing		DEPTH	TO GROUND	WATER:	3.02			
SAMPLING PER	SONNEL:	L. Bisso	on and K. Charl	es-Smith	WATI	ER-COLUMN H	EIGHT:	28.70			
STEEL G	UARD PIPE AROUND	CASING:		$\overline{\mathbf{V}}$	YES		NO				
	LOCKING CAP:			Ø	YES		NO	· · · · · · · · · · · · · · · · · · ·			
PROT		YES	Ø	NO		_					
	<u> </u>	YES		NO							
···	Ø	YES		NO							
WELL INTEGRITY SATISFACTORY:				<u> </u>	YES		NO				
WELL YIELD:			<u> </u>	HIGH		MODERATE		LOW			
COMMEN	Horiba U-22 S										
00						ight by 0.16 gal	/ft for a 2-inch we				
·			acter mines by	mucipiying in		-6.11. 07 0.10 61.	TOTAL 2-INCH WE				
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.				
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	NOTES	TES		
10	0.4	29.16	6.67	I.17	74.9	18.1	-373				
20	0.4	29.55	6.62	1.34	76.5	1.84	-378				
26	0.4	29.95	6.66	1.20	76.7	1.25	-385				
32	0.4	30.19	6.67	1.10	76.7	1.09	-388				
38	0.4	30.70	6.66	1.15	76.7	1.08	-391				
Sample	0.3	30.85	6.65	1.13	76.6	0.83	-392				
		 				·					
			 			<u> </u>	-				
			1								
	Sample collected a	at 11:00 for the	following tests				 				
							 				
		Analytical Me	thod								
		+	160.1 / Alkalinit		.1						
			trate/Nitrite - Me	thod 300.0		· · · · · ·	 	_			
· -		Cations - Meth					 				
		Ammonia - Mo				 	 				
		Kd - distribution	on coemicient				 				
		ļ	+		ļ	<u> </u>	 				

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: $\frac{kS}{L}$ Date: $\frac{7-728}{2}$ Checked by: $\frac{C73S}{L}$ Date: $\frac{4}{7}$

MACTEC Engineering and Consulting, Inc. Raleigli, NC



ORSERVATION WELL SAMPLING WORKSHEET

			OBSERVATION WELL SAMPLING WORKSHEET						
OBSERVATION \	WELL ID:		OW-706L		MAG	CTEC JOB NUM	IBER:	6468-0	7-1950
PROJECT:	Turkey	Point COL Pr	oject	SITE:	FI	lorida City, Flor	ida	DATE:	5/29/200
MEASURED WELL DEPTH	114.56	FT.	SCREENED I	INTERVAL:	17-27	FT.	WELL DIA	METER:	2 IN.
HEIGHT OF	MEASURING POINT	ABOVE LAND	SURFACE:		3.2	CASING M	1ATERIAL:	P	vc
SAMPLING DE	VICE:		See below		TUBIN	G TYPE:	Dedicate	d, Disposable	Tubing
MEASURING F	POINT:	Top of Casing			DEPTH	TO GROUND	WATER:	0.	62
SAMPLING PERS	ONNEL:	J	K. Charles-Smith	h	WATE	ER-COLUMN HEIGHT:		113.94	
STEEL GU	JARD PIPE AROUND	CASING:		V	YES		NO		
	LOCKING CAP:			<u> </u>	YES		NO		
PROTE	CTIVE POST/ABUT	MENT:			YES	\square	NO		
N	NONPOTABLE LABEL:				YES		NO		-
	ID PLATE:			7	YES		NO		
WELL I	TEGRITY SATISFA	CTORY:		<u> 7</u>	YES		NO		
WELL YIELD:				Ø	HIGH		MODERATE		LOW
COMMENTS Monsoon submersible pump				Horiba U-22 S					
 						ight by 0.16 gal/	ft for a 2-inch we	ell	
· · · · · · · · · · · · · · · · · · ·						<u> </u>			-
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	TES
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	NO	1E3
24	0.4	29.50	6.87	1.92	44.4	9.05	-287		
48	0.4	29.42	6.85	1.79	46.7	0.86	-334		
60	0.4	29.54	6.88	1.61	45.7	0.57	-343		
72	0.4	29.57	6.85	1.57	46.2	0.35	-346		
84	0.4	29.60	6.86						
Sample		<u> </u>		1.51	46.2	0.24	-351		
	0.3	29.61	6.83	1.49	46.2 46.4	0.24 0.20	-351 - 351		
	0.3	<u> </u>							
	0.3 Sample collected	29.61	6.83						
		29.61	6.83						
		at 12:35 for the	following tests	1,49	46.4				
		at 12:35 for the Analytical Met TDS - Method	following tests hod 160.1 / Alkalinity	1.49 y - Method 310	46.4				
		at 12:35 for the Analytical Met TDS - Method Anions and Nit	following tests hod 160.1 / Alkalinity trate/Nitrite - Met	1.49 y - Method 310	46.4				
		at 12:35 for the Analytical Met TDS - Method Anions and Nit Cations - Meth	following tests hod 160.1 / Alkalinity trate/Nitrite - Met od 6020	1.49 y - Method 310	46.4				
		at 12:35 for the Analytical Met TDS - Method Anions and Nit	following tests hod 160.1 / Alkalinity trate/Nitrite - Met od 6020 ethod 350.1	1.49 y - Method 310	46.4				

Observation wells purged in accordance with ASTM D-6452-99

Prepared hv.	lust
Prepared DV:	0000-

Prepared by: 100 Date: 7-708

Checked by: 275 Date: 7/7/08



					OBSERVATION WELL SAMPLING WORKSHEET					
OBSERVATION WE	ELL ID:		OW-721U		MAG	CTEC JOB NUM	IBER:	6468-0	7-1950	
PROJECT:	Turkey	Point COL Pr	oject	SITE:	FI	lorida City, Floi	rida	DATE:	5/28/2008	
MEASURED WELL DEPTH:	28.00	FT.	SCREENED	INTERVAL:	14-24 FT.		WELL DIA	METER:	2 IN.	
HEIGHT OF M	EASURING POINT	ABOVE LAND	SURFACE:		3.1 CASING MATERIAL:			PVC		
SAMPLING DEV	ICE:		See below		TUBIN	G TYPE:	Dedicate	cated, Disposable Tubing		
MEASURING PO	INT:		Top of Casing		DEPTH	TO GROUND	WATER:	3.23		
SAMPLING PERSO	NNEL:]	K. Charles-Smit	th	WATE	ER-COLUMN H	EIGHT:	24	.77	
STEEL GUA	RD PIPE AROUND	CASING:		\square	YES		NO			
	LOCKING CAP:			$\overline{\mathbf{Q}}$	YES		NO			
PROTEC	TIVE POST/ABUTM	MENT:			YES	V	NO			
NO	NPOTABLE LABEL	:		<u> 7</u>	YES		NO			
	ID PLATE:			Ø	YES		NO			
WELL INTEGRITY SATISFACTORY:				V	YES		NO			
WELL YIELD:				V	HIGH		MODERATE		LOW	
COMMENTS Monsoon submersible pump			Horiba U-22 S	/N MO15-09.						
		Purge volume	determined by	multiplying w	ater-column he	ight by 0.16 gal	ft for a 2-inch w	ell	_	
			,=							
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO.	TES	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	140	123	
9	0.4	28.91	7.12	10.8	54.8	0.28	-361			
18	0.4	29.22	7.11	10.6	55.5	0.48	-364			
22.5	0.4	29.26	7.08	10.6	52.7	0.37	-364			
27	0.4	29.27	7.08	10.6	53.0	0.46	-362			
31.5	0.4	29.30	7.07	10.8	52.8	0.30	-362			
Sample	0.3	28.92	7.10	10.6	53.1	0.36	-364			
			<u> </u>							
			 							
	Sample collected a	at 11:00 for the	following tests							
			, , , , , , , , , , , , , , , , , , , ,							
		Analytical Met	hod							
····			160.1 / Alkalini	<u> </u>	.1		<u> </u>			
			trate/Nitrite - Me	thod 300.0	ļ					
		Cations - Meth	<u></u>			<u> </u>				
		Ammonia - Me			ļ					
	 	Kd - distribution	on coefficient			ļ				
	<u></u>		<u></u>	L		ļ				

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: _____

Checked by: <u>CBS</u>



ORSEDVATION WELL SAMPLING WODESHEET

						OBSERVATION WELL SAMPLING WORKSHEET				
OBSERVATION W	ELL ID:		OW-721L		MA	CTEC JOB NUM	IBER:	6468-0	7-1950	
PROJECT:	Turkey	Point COL Pr	oject	SITE:	F	orida City, Flor	rida	DATE:	5/28/2008	
MEASURED WELL DEPTH:	107.62	FT.	SCREENED	INTERVAL:	96-106	FT.	WELL DIA	METER:	2 IN.	
HEIGHT OF N	MEASURING POINT	ABOVE LAND	SURFACE:		3.2	CASING N	MATERIAL:	P	VC	
SAMPLING DEV	VICE:		Sec below		TUBING TYPE: Ded			d, Disposable	Tubing	
MEASURING PO	DINT:		Top of Casing	DEPTH TO GROUNDWATER:			WATER:	1.	07	
SAMPLING PERSO	ONNEL:		L. Bisson		WATER-COLUMN HEIGHT:			106.55		
STEEL GU	ARD PIPE AROUND	CASING:			YES		NO			
	LOCKING CAP:			$\overline{\mathbf{Q}}$	YES		NO			
PROTEC	CTIVE POST/ABUT	MENT:			YES	\square	NO			
NC	NPOTABLE LABEI	<i>;</i> :		7	YES		NO	······································		
	ID PLATE:			$\overline{\mathbf{Z}}$	YES		NO			
WELL INTEGRITY SATISFACTORY:					YES		NO			
WELL YIELD:				Ø	HIGH		MODERATE		LOW	
COMMENT	mersible pump, l				, , , , , , , , , , , , , , , , , , , 					
			<u></u>			ight by 0.16 gal	ft for a 2-inch w	ell	·	
										
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	TES	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	NO	165	
25.2	0.4	28.86	6.80	1.71	73.6	175	-337			
48.0	0.4	28.68	6.78	1.18	74.3	5.41	-358			
60.0	0.4	28.62	6.75	1.24	74.4	7.20	-361		·	
72.0	0.4	28.64	6.75	1.08	74.4	7.60	-364			
84.0	0.4	28.60	6.77	1.17	74.3	7.55	-369			
Sample	0.3	28.56	6.76	1.18	74.3	7.55	-370			
										
		 								
			 				+			
	Sample collected	at 13:25 for the	following tests							
							1			
		Analytical Met	hod							
			160.1 / Alkalinity		.1					
			trate/Nitrite - Met	thod 300.0						
		Cations - Meth								
		Ammonia - Me								
		Kd - distribution	on coefficient							
							l			

Observation wells purged in accordance with ASTM D-6452-99

Prepared	by:	ust	

Prepared by: $\frac{US}{US}$ Date: $\frac{7-7-00}{7/7/08}$



OBSERVATION WELL SAMPLING WORKSHEET

					1		· ZZZ Grana	· · · · · · · · · · · · · · · · · · ·		
OBSERVATION WE	LL ID:		OW-735U		MA	CTEC JOB NUM	IBER:	6468-0	7-1950	
РКОЈЕСТ:	Turkey	Point COL Pr	oject	SITE:	F	lorida City, Flor	rida	DATE:	5/27/2008	
MEASURED WELL DEPTH:	30.19		SCREENED	INTERVAL:	16-26	FT.	WELL DIA	AMETER:	2 IN.	
HEIGHT OF MI	EASURING POINT	ABOVE LAND	SURFACE:		3.3	CASING M	MATERIAL:	PV	/C	
SAMPLING DEVI	CE:		See below		TUBIN	G TYPE:	Dedicate	ed, Disposable	Tubing	
MEASURING POI	NT:		Top of Casing		DEPTH	I TO GROUND	WATER:	4.	40	
SAMPLING PERSON	NEL:	ŀ	(. Charles-Smit	h	WATI	ER-COLUMN H	EIGHT:	25.79		
STEEL GUAI	RD PIPE AROUND	CASING:		V	YES		NO			
	LOCKING CAP:			7	YES		NO			
PROTECT	TIVE POST/ABUTN	ŒNT:			YES	Ø	NO			
ИОИ		Ø	YES		NO					
	ID PLATE:			7	YES		NO			
WELL INTI	EGRITY SATISFAC	CTORY:		<u> </u>	YES		NO			
WELL YIELD:				<u> </u>	HIGH		MODERATE		LOW	
COMMENTS	Horiba U-22 S		<u> </u>							
						ight by 0.16 gal/	ft for a 2-inch w	rell		
			·			<u> </u>				
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO.	TEC	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	NO	1ES	
9.5	0.4	29.42	7.02	0.04	84.6	0.99	-334			
19	0.4	29.46	7.01	0.02	84.7	0.99 -351				
23.75	0.4	29.46	7.00	0.01	84.8	0.92	-357			
28.5	0.4	29.45	6.99	0.02	84.8	0.86	-357			
33.25	0.4	29.48	6.99	0.02	84.8	0.90	-357			
Sample	0.3	29.47	7.00	0.02	86.6	0.92	-360			
	Sample collected a	of 11:35 for the	following tests							
	Sample conecieu a	11.55 101 the	Tonowing tests							
		Analytical Met	hod							
		TDS - Method	160.1 / Alkalinit	y - Method 310	.1					
		Anions and Nit	rate/Nitrite - Me	thod 300.0						
		Cations - Meth	od 6020							
		Ammonia - Me	thod 350.1							
		Kd - distributio	n coefficient							

Observation wells purged in accordance with ASTM D-6452-99

Prenared by L.Y.

Checked by: 17-72

Jan 2/

MACTEC Engineering and Consulting, Inc. Raleigh, NC



	1111				OBSERVATION WELL SAMPLING WORKSHEET				HEET
OBSERVATION V	WELL ID:		OW-802U	 	MAG	CTEC JOB NUM	IBER:	6468-	07-1950
PROJECT:	Turkey	Point COL Pr	roject	SITE:	F	orida City, Flor	ida	DATE:	6/5/2008
MEASURED WELL DEPTH	29.11	FT.	SCREENED	INTERVAL:	15-25	FT.	WELL DIA	METER:	2 IN.
HEIGHT OF	MEASURING POINT	ABOVE LAND	SURFACE:		3.4	CASING M	IATERIAL:	P	VC
SAMPLING DE	VICE:		See below		TUBIN	G TYPE:	Dedicated, Disposab		Tubing
MEASURING F	POINT:		Top of Casing		DEPTH	TO GROUND	WATER:	4	1.05
SAMPLING PERS	ONNEL:	1	K. Charles-Smit	h	WATI	ER-COLUMN H	EIGHT:	2:	5.06
STEEL GU	JARD PIPE AROUND	CASING:		$\overline{\square}$	YES		NO		
	LOCKING CAP:			$\overline{\mathbf{Q}}$	YES		NO		
PROTE	CTIVE POST/ABUT	MENT:			YES	Ø	NO		
N	NONPOTABLE LABEL:			<u> </u>	YES		NO		
ID PLATE:				7	YES		NO		
WELL I	WELL INTEGRITY SATISFACTORY: WELL INTEGRITY SATISFACTORY: WELL INTEGRITY SATISFACTORY:								
WELL YIELD:				<u> </u>	HIGH		MODERATE		LOW
COMMEN		Monsoon sub	mersible pump,			 _			
						ight by 0.16 gal/	ft for a 2-inch we		
·····	·····					, <u>-</u>			
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.		2750
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	NC	OTES
10	0.4	28.23	6.86	2.05	82.7	0.91	-352		
20	0.4	28.20	6.86	1.76	82.7	0.50	-355		
25	0.4	28.22	6.89	1.90	82.7	0.57	-360		
30	0.4	28.50	6.88	1.91	82.6	0.52	-363		
35	0.4	28.36	6.84	1.90	82.6	0.48	-361		
Sample	0.3	28.27	6.80	1.90	82.8	0.48	-322		
<u> </u>			 						
 			 		 				
	Sample collected	at 12:35 for the	following tests						
		Analytical Me	thod						
		TDG NG I	1601/47/11:	24.1.1210	<u> </u>				
			160.1 / Alkalinit trate/Nitrite - Me	<u> </u>	.1	-	 		
		Cations - Meth		tilou 300.0	 				
· · · · · · · · · · · · · · · · · · ·	•	Ammonia - Me							
		Kd - distribution					-		
									
		+	†						

Observation wells purged in accordance with ASTM D-6452-99

Prepared by: L-SL-	Date: <u>7-7-25</u>
Checked by: C35	Date: <u>7/7/08</u>



ORSERVATION WELL SAMPLING WORKSHEET

						OBSERVATION WELL SAMPLING WORKSHEET					
OBSERVATION WE	LL ID:		OW-805U		MAG	CTEC JOB NUM	IBER:	6468-0	7-1950		
PROJECT:	Turkey	Point COL Pr	oject	SITE:	F	lorida City, Flor	rida	DATE:	6/5/2008		
MEASURED WELL DEPTH:	33.85	FT.	SCREENED	INTERVAL:	18-28	FT.	WELL DIA	METER:	2 IN.		
HEIGHT OF ME	EASURING POINT	ABOVE LAND	SURFACE:		2.8	CASING M	IATERIAL:	PV	'C		
SAMPLING DEVI	CE:		Sec below		TUBIN	G TYPE:	Dedicate	ed, Disposable	Cubing		
MEASURING POI	NT:		Top of Casing		DEPTH	I TO GROUND\	WATER:	3.0)5		
SAMPLING PERSON	NNEL:	ŀ	(. Charles-Smit	h	WATI	ER-COLUMN H	EIGHT:	30.	80		
STEEL GUAI	RD PIPE AROUND	CASING:		Ø	YES		NO				
	LOCKING CAP:			Ø	YES		NO				
PROTECT	TVE POST/ABUTM	ÆNT:			YES	Ø	NO				
NON	IPOTABLE LABEL	:		$\overline{\mathbf{A}}$	YES		NO				
	ID PLATE:			V	YES		NO				
WELL INTI	WELL INTEGRITY SATISFACTORY:			Ø	YES		NO				
WELL YIELD:				V	HIGH		MODERATE		LOW		
COMMENTS Monsoon submersible pump				Horiba U-22 S	/N MO15-09.						
		Purge volume	determined by	multiplying w	ater-column he	ight by 0.16 gal/	ft for a 2-inch w	eli			
			•	·····		·					
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NO	LE6		
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	1101	LS		
10.5	0.4	28.04	7.29	1.19	64.0	0.86	-296				
21.0	0.4	28.31	7.14	1.18	61.1	0.43	-342				
26.5	0.4	28.19	7.13	1.18	61.0	0.36	-345				
32.0	0.4	28.31	7.10	1.19	60.8	0.32	-345				
37.5	0.4	28.35	7.11	1.19	61.1	0.33	-344				
Sample	0.3	28.26	7.10	1.19	60.9	0.32	-346				
	Sample collected a	t 15:00 for the	following tests								
		Analytical Metl	hod								
	ļ				<u> </u>						
			160.1 / Alkalinit		.1						
			rate/Nitrite - Me	tnod 300.0							
		Cations - Meth									
	 	Ammonia - Me			ļ <u>-</u>		 	· · · · · · · · · · · · · · · · · · ·			
	 	Kd - distributio	n coemicient			 					
						-					

Observation wells purged in accordance with ASTM D-6452-99

 Prepared by:
 a.g.
 Date:
 7-7a8

 Checked by:
 CBS
 Date:
 7/7/08



					OBSERVATION WELL SAMPLING WORKSHEET					
OBSERVATION WI	ELL ID:		OW-809U		MA	CTEC JOB NUM	IBER:	6468-07-1950		
PROJECT:	Turkey	Point COL Pr	oject	SITE:	F	lorida City, Flor	ida	DATE:	5/27/2008	
MEASURED WELL DEPTH:	29.71	FT.	SCREENED	INTERVAL:	15-25	FT.	WELL DIA	METER:	2 IN.	
HEIGHT OF M	EASURING POINT	ABOVE LAND	SURFACE:		3.2	CASING M	IATERIAL:	P	VC	
SAMPLING DEV	ICE:		See below		TUBIN	G TYPE:	Dedicate	eated, Disposable Tubing		
MEASURING PO	INT:		Top of Casing		DEPTH TO GROUNDWATER:			3	.38	
SAMPLING PERSO	NNEL:	ŀ	C. Charles-Smit	h	WATE	ER-COLUMN HI	EIGHT:	26.33		
STEEL GUA	RD PIPE AROUND	CASING:		7	YES		NO			
	LOCKING CAP:			$\overline{\mathbf{Q}}$	YES		NO			
PROTEC	TIVE POST/ABUTN	MENT:			YES	\square	NO			
NO	NPOTABLE LABEL			$\overline{\square}$	YES		NO			
	ID PLATE:			☑	YES		NO			
WELL INTEGRITY SATISFACTORY:				<u> </u>	YES		NO			
WELL YIELD:				<u> </u>	HIGH		MODERATE		LOW	
COMMENTS	Horiba U-22 S	/N MO15-09.	<u> </u>							
 .						ight by 0.16 gal/	ft for a 2-inch we			
		-								
PURGE VOLUME	PURGE RATE	TEMP	PH	D.O.	SP. COND.	TURBIDITY	O.R.P.	NC	TES	
(gallons)	(gpm)	(°C)	(S.U.)	(mg/L)	(mS/cm)	(NTU)	(± mV)	NC	/1E3	
9	0.4	31.02	6.99	0.01	85.1	4.39	-368			
18	0.4	30.83	6.98	0.02	84.0	1.09	-370			
22.5	0.4	30.99	6.98	0.02	84.1	0.97	-371			
27	0.4	30.81	6.98	0.01	, 84.0	0.99	-370			
31.5	0.4	30.81	6.98	0.01	83.9	0.99	-371			
Sample	0.3	30.82	6.98	0.01	83.9	0.97	-371			
							-			
	 									
	Sample collected a	t 14:55 for the	following tests							
			l losso and tests							
		Analytical Met	hod							
			160.1 / Alkalinit	<u> </u>	.1					
		Anions and Nit	rate/Nitrite - Me	thod 300.0						
		Cations - Meth								
		Ammonia - Me	thod 350.1							
		Kd - distributio	on coefficient							
		1								

Observation wells purged in accordance with ASTM D-6452-99

repared by: _	with	Date:	7-7-08	
_		_	i	,

Checked by: <u>CBS</u>

Laboratory Test Reports

DCN# TUR512



Supplier Deviation Disposition Request

Notes

- 1. COMPLETE INSTRUCTIONS ON BACK OF THIS SHEET
- 2. Items 1-18 below to be completed by supplier
- 3. *Items, Bechtel entries only
- 4. Nonapplicable items to be marked "N/A"

- 5. Attach additional information whenever necessary
- 6. Bechtel must be notified within 5 days after detection of deviation
- A copy of the completed SDDR form shall be included by the supplier in the quality verification data package for each item to which this SDDR applies.

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For Sup	plier Use						William ALA	or Bec	htel Use	117 T2 T2 119 11 11 11 11 11 11 11 11 11 11 11 11	
Supplier SDDR No.	Date Submit	ted Project	FPL Turkey	Point CC	L		Bechtel SDDF			Received	
76	5/18/09	Job No.	25409				see abo	ove	74/	19/09	
Supplier Name		Address	·		City	& State			Zip Code		
MACTEC Engineerin Consulting, Inc	g and	3301 Atlantic	Avenue		Raleigh, NC				27604		
2. Supplier's Order No.	3. Supplier	's Part No.	4. Supplier's	Part Name		5. Deviation	on Detected		Previous		
NA	NA		NA			Date 9/22/200		- `		,	
7. Bechtel PO & Rev. N		Part No.	9. Bechtel Pa	rt Name		10. Bechte	el SQR Notified	11. E	1. Bechtel Eng. Notified		
Subcontract No. 254 102-3PS-CT20-0000 rev 001			NA		}	Date 5/49/20	Method			Method	
12. Deviation Description	n (Attach extra si	neets nhotogran	he eketches e	tc as nec	9662	5/18/20		5/1	8/2009	SDDR	
Please see attached	NCR TP 40 (at	tachment 3 pgs	s).	sto., as nec	cssai	iy and ide	anny quantity and	senan	numbers	as applicable)	
13. Supplier's Proposed	Disposition	Use-As-Is	3	Repair		×	odify Bechtel Red	quireme	ent		
DATA RE	JECTED	AS INDI	CATED	134 /	477	TACHE	O NCR	TE	40	•	
14. Cost Impact No	ne			15. Sched	lule ir	npact	None				
16. Proposed Dispositio	n and Technical	(plus Cost/Sched	lule if applicabl	e) Justifica	tion:	Attach	extra sheets, sketo	ches. etc	. as neces	sarv	
Please see attached									,		
17. Associated Supplier	Document Chan	ge(s) none				-					
18. Supplier's Authorize	d Representative						······································				
Name		Signature	_		Title				Date		
RICHARD S.	Augen	as	a.,	٠.	1:	ROJEL	T MANA	1.c.6.1	_ 5	18-09	
*19. Bechtel Engineerin	g Action							· · · · · ·	L		
Accepted	Engineering	Drawing (Change	Ве	echte	1	Supplier	Lic	ensing D	oc. Changes	
Rejected	Follow-up	Spec/Red	ą. Change	Ве	echte	,	Supplier		ce Adjust	I	
		Other Su	ppliers Affected				Other				
*20. Bechtel Disposition						, etc., as r		Yes	7.		
*21. Bechtel Disposition		UR Da				ACUOIT	reduited	1 es			
l //	Bloc		11/09	22. Suppli	er	1.			Date		
Checker	1/2	61	11/01		N	1 / G				·	
EGS MAGIN	ME JL	A	47/09	*23. Bech	tel Su	ipplier Qu	ality Represental	tive	Date		
- A14A	<u> </u>	<u> </u>	11.07	L	i,	4/19					
SDDR Docume	nt – attach	ment 3 Pag	ges	_				DC	N# TU	R765	
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PAGE 10 5

Rev. 1

FPL COL PROJECT - Turkey Point

MACTEC Project No. 6468-07-1950

NCR TP 40	Nonconformance and Corrective		
Organization: MAC	CTEC Engineering and Consulting	Location: Raleigh	
Reported By: Willia	ım S. Grimes		Date: 9/22/08
	Noncon	formance	
Description of Nonc			·
Description of None	conformance: Based on review of the laborator	V test reports, it appears that the total disc	olved golide (TDQ) require
are erroneous. The	measured TDS results are typically less than th	e sum of the individual analytes TDS va	lites should be as large on
larger than the sum	of the available analytes.		mon stronte on as tarke al
Representative Noti	fied: Al Tice		
Date Notified: 9/22		Date Corrective Action Plan Due:10/10	1/2008
	Corrective		
that the TDS results	nation to Determine Root Cause: MACTEC Se did not appear accurate. Additionally, MACT nine if errors were made during the testing.	nior Scientists reviewed the laboratory te	st reports and concluded ca to review their testing
requirements of not suspended particular	Due to the high concentrations of analytes in the exceeding 200 milligrams of residue for the TI tes may have affected pipette volume accuracy. I insufficient sample volume.	S tests. TestAmerica reported in their in	vestigation that any
testing assignment v	sed on discussions with the Bechtel, we unders was to support review of specific conductivity d promise Bechtel's objective for the assignment	ata. Therefore, we believe the potentially	erroneous TDS test
5		· · · .	
Description of Corre	ective Actions (current and to prevent recurrent	e): A MACTEC Senior Chemist reviewed	d the laboratory test reports
to identify issues and	d disposition the data. Additionally, MACTEO	QA coordinated with TestAmerica to ide	entify steps /procedures to
make sure this issue	is not repeated in future analyses.		
B-64-10 1::	D.4. 10/15/00	·	
Estimated Completic	on Date: 10/15/08		
n			
Recommended dispe	osition of nonconforming items (i.e. reject/disp	ose, repair, rework, use-as-is) Include tecl	nnical justification:
MACTEC rejects th	ne TDS results, please see attached disposition	statement.	
10 0000 61 77 115			
	tion Required: YES NO		
Signature of Prepa William S. Grimes	rer: Walk s. 2	Date: 5	-14-09
Corrective Action	(XXI)	1-	. 4 9
Approval Signatur	e: (Principal or Chief Engineer)		-14-119
	Corrective A	ction Closure	
Comments:			
Approved/Actual D	sposition of Nonconforming Items:		
BECHTEL Approx	val Signature: To be confirmed with SODE	. //	Date:
MACTEC QAR A		Date:	5/14/09
MACTEC Chief E	ngineer Signature	Date:	tial a ste
L			111707 6/14/09
		DCN	I: TUR

FPL COL Project-Turkey Point NCR Form - Page 1 of __1__

Rev 1 2-23-08

DCN# TUR765



NCR TP 40 Disposition Statement

Laboratory reported TDS values should be at least equal to, if not greater than the summation of the individual cations and anions that comprise TDS. During our review of the TDS data, MACTEC identified that the reported TDS values for eight of the twelve groundwater samples tested were less than the summation of the individual analytes. MACTEC identified that the charge balances were all below 10% error which suggests good analytical accuracy for the cation and anion results thus supporting the use of the summed totals for comparison with reported TDS values. Based on these comparisons, the TDS values reported by TestAmerica were deemed suspect.

MACTEC QA personnel interviewed TestAmerica to determine if there were operational or procedural issues that affected the test results. TestAmerica identified that to meet the method requirement for final residue weight, they had to dilute the sample and use a smaller than normal sample aliquot. TestAmerica used a narrow tipped pipette and determined that any suspended particles could have affected pipette volume accuracy, which would have produced lower TDS results (see attached report). To eliminate this potential source of error, TestAmerica ordered custom-made, wide mouth pipettes for drawing small volume aliquots. Additionally, TestAmerica implemented a policy to check to TDS/chloride ratio for samples to determine if the test needs to be rerun within the hold times.

No definite cause for this error could be determined through our investigation. However, MACTEC suspects that inaccurate sample volume is the source for the lower than expected TDS results. Therefore, MACTEC **rejects** all TDS results reported by TestAmerica.

Page 2 of 3

DCN# TUR765

SDDR PAGE 3 of 5



10-10-08

Turkey Point Data

After re-reviewing the data for the TDS and Chlorides, no definitive answer for the higher Chloride result could be determined. The data for the samples, balances, pipettes and internal QC were re-reviewed and no definitive cause for the low bias to the TDS could be determined. The laboratory conducted an ion mass balance evaluation for the samples, which showed that the charge balance differences were all below 10%, indicating good analytical accuracy for the cations and anions, including chloride. Data was also reviewed by a corporate technical director. The samples were run, for all parameters, at a high dilution due to the high levels of the requested analytes present in the samples. Initially it was suspected that the high levels of the salts may have been a contributing factor. After reviewing technical documents it was decided that the high salt levels in the samples, while making the analysis difficult due to the dilutions we had to apply, really would not explain the lower TDS numbers. The original sample containers were pulled and there were no visible solids found in the sample remaining in the containers.

The Method blanks and LCS samples run with each set of data met all criteria. The balances and pipettes used for the analyses were calibrated the day of use and fell within acceptance criteria. The laboratory has passed the last several sets of PT samples for TDS.

One possible reason for the low TDS result in these samples is the small amount of material used to perform the TDS analysis. The method requires that the final weight of the residue not exceed 200 mg. In order to meet this, the lab used 1 ml of sample, due to the high levels of TDS present. The one ml aliquot is drawn up using a narrow tipped pipette. Any suspended particulates in the sample could interfere with the pipette volume accuracy. The lab has ordered a custom made Class A wide mouth pipette to eliminate this potential source of error.

Another corrective action we will implement is an immediate check of the TDS/Chloride ratio for samples, so that if it fails we can re-run within hold time.

We continue to monitor and evaluate the TDS analysis.

Marti Ward

Quality Assurance Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

13715 Rider Trail North Earth City, MO 63045 314-298-8566 www.testamericainc.com

13715 Rider Trail North Earth City, MO 63045 tel 314.298.8566 fax 314.298.8757 www.testamericainc.com

DR PAGE 4 of 5

Page 3 of 3

DCN# TUR765

Supplier Deviation Disposition Request (Continuation Sheet)

Bechtel SDDR No. 25409-102-YD4-CY00-00076

20. Bechtel Disposition Statement

This SDDR addresses MACTEC NCR TP 40 regarding the laboratory test results for water sample TDS values. The test results have been rejected by MACTEC as the total TDS values for eight of the twelve groundwater samples tested were less than the summation of the individual analytes. TDS totals should be as large as or larger than the sum of the analytes.

Bechtel concurs with rejecting the data and requests that groundwater samples be retested. The October 10, 2008 letter from TestAmerica indicates there are changes that could be made to improve the test procedure and the TDS results while staying within the 200 mg residue limit. Bechtel requests that the TestAmerica test procedure be reviewed and accepted prior to running any further tests as the extremely high salinity values in the groundwater must be accounted for.

Bechtel does not concur with the proposed disposition of **MODIFY BECHTEL REQUIREMENT** as the data has been rejected.



Supplier Deviation Disposition Request

Notes

- 1. COMPLETE INSTRUCTIONS ON BACK OF THIS SHEET
- 2. Items 1-18 below to be completed by supplier
- 3. *Items, Bechtel entries only
- 4. Nonapplicable items to be marked "N/A"

- 5. Attach additional information whenever necessary
- 6. Bechtel must be notified within 5 days after detection of deviation
- A copy of the completed SDDR form shall be included by the supplier in the quality verification data package for each item to which this SDDR applies.

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Supplier SDDR No.	Date Submit			ey Point CO	<u> </u>		Bechtel SDDR I		Date Received		
77	6/5/09	Job No.	25409				SEE ABOV	E	E 6/9/09		
1. Supplier Name		Address			City & State			Zip Code			
MACTEC Engineering Consulting, Inc	and	3301 Atlantic	Avenue		Rale	igh, NC			2	27604	
2. Supplier's Order No.	3. Supplier	r's Part No.	t No. 4. Supplier's Part Nan			. Deviati	on Detected		Previous ers and D	SDDRs	
	1					Date	Method	(I TUTTIO	cia allu L	awo)	
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7. Bechtel PO & Rev. No.	8. Bechtel	Part No.	9. Bechtel I	Part Name	1		el SQR Notified			ng. Notified	
Subcontract No. 25409				-	Date	Method	D	ate	Method		
102-3PS-CT20-00001 rev 001		NA			6/5/200			2009	SDDR		
12. Deviation Description	(Attach extra s	heets, photograp	hs, sketches	s, etc., as nec	essar	y and ide	ntify quantity and	serial n	umbers	as applicable)	
Please see attached N	ICR TP 41 (at	tachment 6 pg	s).								
13. Supplier's Proposed I	Disposition	Use-As-I	s	X Repair		М	odify Bechtel Requ	ulremer	nt		
	_										
14. Cost Impact Non-	e			15. Sched	dule Ir	npact	None				
16. Proposed Disposition	and Technical	(plus Cost/Sched	dule if applic	able) Justifica	ation:	Attac	h extra sheets, sketch	nes, etc.,	as neces	sary	
Please see attached d		•		·-							
17. Associated Supplier I	Document Char	ige(s) none									
18. Supplier's Authorized	Representative)			,			·			
Name		Signature	\sim		Title	_			Date	•	
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*19. Bechtel Engineering	Action										
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 	Follow-up	Spec/Re	q. Change	E	Sechte		Supplier	Pric	æ Adjus	tment	
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*20. Bechtel Disposition		~ ()	(Attach extr				necessary).	Yes		□No	
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PAGE 1 of 8

Rev. 1

FPL COL PROJECT - Turkey Point

MACTEC Project No. 6468-07-1950

NCR TP 41 Nonconformance and Corrective Action Report	
Organization: MACTEC Engineering and Consulting	Location: Raleigh
Reported By: William S. Grimes	Date: 5/20/2009
Nonconformance	
Description of Nonconformance: During review of the bicarbonate and carbonate al results (SM18 2320 B), it was noted that the summation of the bicarbonate and carbo reported total alkalinity results for seven of the twelve samples. TestAmerica inform these samples were not valid.	onate values were significantly lower than the
Representative Notified: Al Tice	
	Action Plan Due: 5/20/2009
Description of Evaluation to Determine Root Cause: MACTEC Senior Scientists rethat seven of the Total Alkalinity results did not agree with the summation of the bic information from TestAmerica that the bicarbonate results were erroneous, MACTE condition. TestAmerica reported that the test results manually entered into the report from the pH 4.5 column of the bench sheet as opposed to the bicarbonate result column.	viewed the laboratory test reports and concluded arbonate and carbonate results. Upon receiving C requested that TestAmerica evaluate this t generation software were inadvertently copied
Assignable Cause: The assignable cause is a data entry error. Additionally, a second conducted.	i level review of the data was not thoroughly
Potential Harm: Based on discussions with the Bechtel, we understand that the prim testing assignment was to support review of specific conductivity data. Therefore, we Bechtel's objective for the assignment. This will be confirmed with formal submittations.	re believe this deviation will not compromise I of an SDDR to cover this NCR.
Description of Corrective Actions (current and to prevent recurrence): MACTEC recurrence a report that describes their investigation, corrective action, and steps to prevent required. TestAmerica reported that the analyst and second level reviewer were both aspects of TestAmerica's QA policies. To prevent recurrence, TestAmerica has more entered into the laboratory LIMs system are highlighted to serve as a reminder as to Estimated Completion Date: 5/28/2009	vent recurrence. No MACTEC corrective action is a letted to the error and re-trained on the critical lifted their spreadsheet such that the columns to be
Recommended disposition of nonconforming items (i.e. reject/dispose, repair, rewor	k, use-as-is) Include technical justification:
Repair - see attached disposition	
10 CFR 21 Notification Required: YES NO	
Signature of Preparer: William. S. Grimes Will. 2-2	Date: 5-18-29
Corrective Action Approval Signature (Principal of Chief Engineer)	Date: 5-2-09 Date: 6-2-09
Corrective Action Closure	
Comments:	409
3 on all	42.1
Approved/Actual Disposition of Nonconforming Items: REWOR	<u>K</u>
DECUMENT A STATE OF THE STATE O	Date:
BECHTEL Approval Signature: To be configured with SDDR / MACTEC QAR Approval Signature:	Date: 6/4/09
MACTEC Chief Engineer Signature:	Date: 5/3/49
	DCN: TUR
	-n. : //

FPL COL Project-Turkey Point NCR Form - Page 1 of 16 Jon 6 Hog

SIDDR PAGE 2 28

NCR TP 41 Disposition Statement

Review of the laboratory test data collected from the selected observation wells indicated that the total alkalinity results were significantly greater than the summation of the bicarbonate and carbonate alkalinity results for the groundwater samples collected from observation wells OW-606L, OW-606U, OW-621U, OW-706L, OW-706U, OW-721L, and OW-721U. After being informed of this condition, TestAmerica reported that the bicarbonate alkalinity results were in error and conducted an investigation.

Through their investigation, TestAmerica identified that a data entry error had occurred during the transfer of the data from the laboratory bench sheets to the LIMs system used for data report preparation. The analyst had apparently transferred the results from the pH 4.5 column into the reporting software as opposed to transferring to bicarbonate results. Additionally, TestAmerica identified that the second level data review was not thoroughly conducted for the two sample lots affected. TestAmerica reported that the analyst and second-level reviewer were alerted to this error, and were re-trained in the critical aspects of TestAmerica's Qulaity Assurance policies. To prevent recurrence, TestAmerica reported that they have modified the bench sheets such that the columns of data that are transferred to the LIMs system are highlighted to remind analysts to import the correct data. A copy of TestAmerica's Non-Conformance Report is attached.

Based on these findings, TestAmerica issued revised laboratory test reports for those two sample lots. MACTEC has reviewed these reports and accepted the revised bicarbonate alkalinity results. MACTEC has revised Table 5.3 "Summary of Groundwater Test Results" that was included in the Final Data Report Revision 2 10-6-2008. A copy of this table is attached.

MACTEC's recommended disposition of the bicarbonate alkalinity data is to repair the data to include the revisions made by TestAmerica. The revised data, as shown on the attached table, is released as project data.

DCN# TUR781

SDAR PAGE 3 of 8





TestAmerica Laboratories, Inc.

Non-Conformance Report: Alkalinity (Lot F8E300223, F8E290268)

The alkalinity data was incorrectly reported for Lots F8E290268 and F8E300223. The client notified the lab that in both reports, the total alkalinity results were much higher than the summation of Alkalinity-bicarbonate and Alkalinity-carbonate results. The sample duplicate results were outside (high) of the QC limits for total alkalinity. All other method QC samples were within acceptance criteria.

Review of the data shows an error in transcribing the results from the bench sheet to the laboratory's LIM system. The results manually entered into the report generation software were inadvertently taken from the pH 4.5 column on the spreadsheet, instead of from the bicarbonate results column. (See attached bench sheet) No calculation errors were found, and no changes to the raw data are required.

A second, or peer, review of the data is a requirement of the TestAmerica St. Louis QA program. This review includes a comparison of the data on the spreadsheet to the data entered into the LIMs system. In this instance, the second level review was not thoroughly conducted. We recognize the importance of providing accurate results, the analyst and the second level reviewer have been made aware of the issue and re-trained on the key aspects of our process. QA will monitor the process to ensure compliance.

To determine the extent of the error and to determine if it is systematic, QA reviewed sets of alkalinity data before and after this occurrence. No other instances were identified, indicating that the error is isolated and not indicative of the process. No systematic deficiencies were noted. To prevent further occurrences, the spreadsheet is being updated to highlight the columns that are to be used to enter data into the LIMs system. This will act as a reminder as to which data is to be reported.

TestAmerica St. Louis apologizes for any inconvenience caused by this error. If you have any questions, or require additional information, please contact me at (314) 298-8566 or marti.ward@testamericainc.com.

Regards,

Marti Ward

Quality Assurance Manager

TestAmerica St. Louis

13715 Rider Trail North Earth City, MO 63045 tel 314.298.8566 fax 314.298.8757 www.testameri**可吃**种了UR781

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SDDR PAGE 4.

	TestAprierip語はLishiftesbergetory は本語で記される。 Alkalinity Method 318.1 (Waters)								•	•						
Analyst.	300			;	Titrent			٠.	٠.				·			
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aboratary (C	ung/t.	mL (Norn. SOmi)	Di water (Nors. 100mQ	Ini. (Necs. SOme)	pH	pH 4.5		2.5.Hq	Total pH 4.5	LowpH4.2	Phonyl pří 8.8	Oarbonale	Bloerbonate	Hydrodda	Recovery %	RPD %
CXAK		.50		60	6,86	8,86			177.00		0.00	0,80	177.00			
that .		50		80	7.05	8.2			164.00		E.GO	0.50	184.00			
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icial Alkalinity,		_		(gH 4.51)-m(Q							•					

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DCN# TUR781

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500R PAGE 5088

Lims Data Entry Print Out

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1	Q12X8-1-A3	91	mg/L	5	05/02/08	.00	n	91.0	5.0	1.00
1	072LJ-1-AB	72	mg/L	5	06/02/08	-00	x	71.0	5.0	1.00
3	0831J-1-HK	73	mg/L	5	06/02/08	.00	x	73.0	5.0	1.00
1	DIZLW-1-AE	55	mg/L	5	06/02/09	.00	X	\$5.0	5.0	1-00
1	DESTA-1-W	52	wg/L	5	06/02/08	.08	×	B2.0	5.0	1.00
1	W2#J-1-A3	51	mg/L	5	06/02/08	.00	H	£1.0	S .0	1.00
1	17236J-1-G7	50	mg/L	5	06/02/08	.00	×	50.0	5.0	1.00
1	2012 PX-1-AB	56	ng/L	5	06/02/08	-00	N	56.0	5.0	1.00
1	(H2P2-1-AF	55	mg/L	5	06/02/08	-00	X	55.0	5.0	1.00
1	minj-1-aj	8.2	mg/L ·	5	06/02/08	.00	ж .	8.2	5.0	1.00
1	DN3JD-1-AJ	9	mg/L	5	06/02/08	-00	n	9.0	5.0	1.00
1	013JR-1-AJ	7.75	mg/L	5	06/02/08	.00	X.	7.8	5.0	1.00
1	Qf3JT-1 -1 J	8.25	mg/L	5	06/02/08	-00	M	8.2	5.0	1.00
1	0F46H-1-A2	76	mg/L'	5	06/02/08	.00	x	76.0	5.0	1.00
3	014 6N-1-DK	78	ng/L	S	06/02/08	-00	M	78.0	5.0	1.00
3	M47P-1-AD	55	mg/L	5	06/02/88	-00)a	55.0·	5.0	1.00
1	Dye-1-Vebro	20 2	wg/L	5 .	06/02/08	-00	M	10.2	5.0	1.00
1	msji-1-am	9.5	wg/L	5 .	06/02/08	.00	M	9.6	5.0	1.00
1	DRSJ2-1-AM	9.45	mg/L	5	06/02/08	-00	N	9.4	5.0	1.00
1	XX5J2-1-A5	9.3	mg/L	5	06/02/08	-00	n	9.3	5.0	1.00
٠,	ea-l-nwom	52	-mg/L	5	06/02/08	.00	N	52.0	5.0	1.00
1	KN6XA-1-AB	79	mg/L	5	06/02/08 .	.00	n	79.0	5.0	1.00
1	(N63091 AR	121	mor/L	s	06/02/08	.00	100	121	5.0	1.00

is is

DCN# TUR781

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SDDR PAGE: 6 of 8

Table 5.3 SUMMARY OF GROUNDWATER TEST RESULTS TURKEY POINT COL PROJECT MACTEC PROJECT NO. 448-07-1950

Analytical Method -		166.1				600	29C						30	6.0			310.1 - A	calluity	SM 18 2320B	359.1	SM18 1030F & AFI
Constituent >		TDS	Calcium	Iron	Magnesium			Silica	Silicon	Sodium	Bromide	Chloride	Fluoride	Sulfate	Nitrate	Nitrite	Bicarbonete	Carbonete	Total Alkalinity	Ammonia*	Ion Balance Difference
Well ID	Date Collected	mg/L			,		/L						m	/L			ng.	/L	mg/L	μg/L	%
																				,	,
OW-606L	5/28/2008	49100	632,000 N	<00U	1,880,000 N	39.1	549,000 N	2,630	<250,000 N	15,100,000 N	62.5	29,600	<20.0	3,860	40.20	200	165	\$.0	165	1,580	3.2
DW-606U	5/28/2008	43100 ^R	535,000 N	318 NB	1,730,000 N	35.4	525,000 N	729	<250,000 N	14,400,000 N	56.6	27,900	∠2 0.0	3,470	<0.20	<200	155	40	155	844	2.7
OW-621L	6/4/2008	52800 ⁸	574,000 N	<50.000 N	1.960.000 N	<2,000 N	586,000 N	133,000 IB	62,100 JBN	16,300,000 N	65.9	31,300 B	<20.0	3,610	<0.20	<200	181	₹5.0	181	1,300	2.8
OW-621U	5/29/2008	19400 ^R	492,000 N	453 NB	1.600,000 N	36.8	476,000 N	637	<250,000 N	13,100,000 N	50.6	25,500	₹1.0	3,210	<4.0	<200	189	₹5.0	189	588	2.7
OW-706L	5/29/2008	17400°	413,000 N	531 NB	1.170.000 N	8.3	327,000 N	7.560	<250,000 N	9,440,000 N	37.7 J	19,100	<1.0	2,280	<4.0	<200	191	45.0	191	611	4.0
OW-706U	5/29/2008	40500 [®]	725,000 N	178 NB	2.150,000 N	43.5	658,000 N	1,840	<250,000 N	17,500,000 N	70.5	33,300	<1.0	3,850	<4.0	<200	204	<5.0	204	2,090	1.1
OW-721L	5/28/2008	54600 ^R	667.000 N	362 NB	2.020.000 N	46.2	587,000 N	3,170		16,300,000 N	64.9	31,100	<20.0	3,990	<0.20	200	180	ර.0	180	1,820	1.7
OW-721U	5/28/2008	45400 ^R	603,000 N	329 NB	1.890,000 N	58.1	569,000 N	848		15,400,000 N	60.1	29,900	<20.0	3.860	<0.20	<200	164	⋖.0	164	1,680	2.8
OW-735U	5/27/2008	40.200 ¹⁰	749,000 N	133 NB	2.140.000 N	32.7	655,000 N	<250	<250,000 N		267	37,500	<20.0	4.090	c4.0	<200	179	4.0	179	2,150	6.7
					1.980.000 N	2.000 N	586,000 N	143,000 J		16,400,000 N	65.1	31.600 B	<20.0	3,720	<0.20	<200	178	6.0	178	1,400	3.0
OW-802U	6/5/2.006	53900 ^x	579,000 N	<50,000 N											<0.20	<200	177	<5.0	177	548	6.9
OW-805U	6/5/2008	45700°	447,000 N	<50,000 N	i 1,570,000 N	<2,000 N	493,000 N	107,000 3		13,200,000 N		27,600 B	₹0.0	3,070							
O₩-809U	5/27/2008	34,800 ^{IK}	704,000 N	158 NB	2,040,000 N	28.I	607,000 N	<250		16,700,000 N	241 J	35,900	<1.0	4,050	<0.0	∠200	177	40	177	2,210	7.4

* = Test conducted on Nitrogen, as Ammonia.

< # = Indicates analyte not desected at or above the method detection limit.

<000 = Indicates smallyto detected in the associated method blank at a concentration between the method detection limit and quantization limit. Based on EPA 540-R-04-04, this result has been flagged as "non-detect" at the quantization limit.

N = Spiled analyte recovery is outside stated control limits. Method performance confirmed using Laboratory Control Spiles sample results.

I = Estimated result. Result is less than the reporting limit.

B = Method blank contamination. The associated method blank contains the rarget analyze at a reportable level. These data should be used with caution.

1 = Because the initial results exceeded the SOP limits for this test, the samples were dileted and re-analyzed. Re-analysis was conducted out of hold time.

Because the tender result has been rejected during data review process (see Section 5.5 for discussion). These results are not considered valid and should not be used.

repared by: USC-

Po44-2:31

Checked by: <u>CBS</u>

Des: 5/22/09

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MACTEC Engineering and Constiting, Inc. Rainigh, NC

Supplier Deviation Disposition Request (Continuation Sheet)

Bechtel SDDR No. 25409-102-YD4-CY00-00077

20. Bechtel Disposition Statement

This SDDR addresses MACTEC NCR TP 41 regarding the bicarbonate alkalinity laboratory test results for groundwater sample from observation wells OW-606L, OW-606U, OW-621U, OW-706L, OW-706U, OW-721L, and OW-721U. The reported total alkalinity results were much higher than the summation of alkalinity-bicarbonate and alkalinity-carbonate results.

Bechtel concurs with the corrective actions taken:

- MACTEC notified the analytical laboratory (TestAmerica), which after review of the data identified that a data entry error had occurred during transfer of the data from the laboratory bench sheets to the LIMs system used for report preparation. No calculation errors were found, and no changes in the raw data were required.
- TestAmerica, in order to prevent a recurrence of this problem, retrained their analysts in the critical aspects of TestAmerica's Quality Assurance policies and modified data sheets to highlight columns of data that are transferred to the LIMs system as a reminder to the analysts to import the correct data.
- TestAmerica issued revised laboratory test reports to MACTEC.
- MACTEC QA reviewed these reports and accepted the revised bicarbonate alkalinity results and revised Table 5.3 "Summary of Groundwater Test Results" included in the Final Data Report Revision 2 10-6-2008.

Bechtel concurs with the proposed disposition of **REPAIR** the data to include the revisions made by TestAmerica.

Sheet 70f 7



DOCUMENTATION OF TECHNICAL REVIEW SUBCONTRACTOR WORK PRODUCT

Project Name: Turkey Point COL Project Project Number: 6468-07-1950 Project Manager: Scott Auger Project Principal: Tom McDaniel The report described below has been prepared by the named subcontractor retained in accordance with the MACTEC QAPD. The work and report have been reviewed by a MACTEC technically qualified person. Comments on the work or report, if any, have been satisfactorily addressed by the subcontractor. The attached report is approved in accordance with section QS-7 of MACTEC's QAPD. The information and data contained in the attached report are hereby released by MACTEC for project use. REPORT: Analytical Report Lot #: F8F050344 rev1 SUBCONTRACTOR: TestAmerica, Earth City, MO DATE OF ACCEPTANCE: 7/23/2008 TECHNICAL REVIEWER: William S. Grimes PROJECT PRINCIPAL: Tom McDaniel



LABORATORY DATA REVIEW CHECKLIST

Client Bechtel Power Corp. Laboratory TestAmerica Inc.

MACTEC Project <u>6468-07-1950</u> Data Report Number/Date <u>Lot# F8F050344 rev1/7-9-08</u>

NOT

		<u>YES</u>	<u>NO</u>	<u>APPLICABLE</u>
1.	Laboratory analytical data report appears complete (all data results present for all samples submitted for analysis) and there are no apparent transcription errors:	<u> ✓</u>		
2.	Samples analyzed within applicable holding times (based on date of sample collection):*	<u>✓</u>		
3.	Trip blanks, field blanks or laboratory method blanks are free of blank contamination:		<u>✓1</u>	
4.	If field duplicate samples collected, calculated results meet Relative Percent Difference guidelines: **			<u></u> ✓
5.	Surrogate recoveries (organic analyses only) within laboratory reported recovery acceptance ranges:			<u>✓</u>
6.	If Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples required to meet project objectives, Percent Recoveries (%R) and Relative Percent Difference (RPD) within laboratory reported acceptance ranges:		<u>√²</u>	_
7.	Reported detection limits meet project objectives (e.g., are capable of achieving applicable site standards):	<u>✓</u>		
8.	Completed Chain-Of-Custody received noting sample/custody seal condition (with airbill, if appropriate):	<u>✓</u>		
9.	Analytical costs within authorized budget for these services:			<u> </u>
	COMMENTS: ¹ Estimated concentrations of silica, silicon, and chloride were detected in the method blank, at concentrations analytes in site samples were considerably higher, and likely reflect ambient aquifer conditions. ² MS/MSD recover due to matrix interference. QC established based on acceptable LCS recoveries and results for analytes with acceptable results for analytes with acceptable results is intended for use with the laboratory reporting formats typical of most projects. If "no" is answere through 7, a more detailed Data Validation may be required, and a person knowledgeable in Data Validation protocols used if the project scope requires Data Validation from the onset.	rics were out ecoveries. d to one or r	side QC lin	nits for several analytes possibly above checklist questions I
	 tised if the project scope requires Data variously in the onset. * = Based upon EPA Guidance and the applicable analytical method references. See reverse side of checklist for a second content of the conte	letails.		
	3. ** = Based upon EPA Guidance. Use these criteria on duplicate and sample results which exceed five times the re details. Checked by:		tion limit. S	See reverse side of checklist for



ANALYTICAL REPORT

REVISED

PROJECT NO. 6468071950

FPL Turkey Point COL

Lot #: F8F050344

Al Tice

MACTEC Engineering and Cons. 3301 Atlantic Ave. Raleigh, NC 27604

TESTAMERICA LABORATORIES, INC.

Ivan Vania
Project Manager

July 9, 2008

Case Narrative LOT NUMBER: F8F050344 – Revision 1

This report contains the analytical results for the sample received under chain of custody by TestAmerica St. Louis on June 5, 2008. This sample is associated with your FPL Turkey Point COL project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

This revision contains results for TDS analysis and corrections to flags for ion balance.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP-MS (SW846-6020)

The MS (MSD) recoveries for batch 8168278 - calcium, potassium, magnesium, sodium, silicon are outside the established QC limits. The analyte concentrations in the original sample are greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8F050344 (1): OW-6211

The MS (MSD) recoveries for batch 8168278 – iron are outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8F050344 (1): OW-6211

The MS (MSD) recoveries for batch 8164260 - manganese are outside the established QC limits due to matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8F050344 (1): OW-6211

Batch 8168278:

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limits were adjusted for the dilution since no analysis at a lesser dilution was performed.

Affected Samples:

F8F050344 (1): OW-6211

Batch 8168278:

The serial dilution for calcium is outside of method acceptance criteria indicating a potential matrix interference. All associated samples are flagged accordingly.

Affected Samples:

F8F050344 (1): OW-6211

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F8F050344

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
pH Aqueous	SW846 9040	SW846 9040
Alkalinity, Total	SM18 2320 B	SM18 2320 B
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Ion Balance (%Difference)	SM18 1030F & AP	SM18 1030F & AP
ICP-MS (6020)	SW846 6020	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.	
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.	
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.	٠.

SAMPLE SUMMARY

F8F050344

<u>WO # </u>	SAMPLE#	CLIENT SAMPLE ID	DATE	SAMP TIME
KPF63	001	OW-6211	06/04/08	14:20

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

MACTEC Engineering & Consulting Inc

Client Sample ID: OW-6211

TOTAL Metals

Lot-Sample # Date Sampled			eceived.	.: 06/05/0)8	Matrix:	WATER.
		REPORTING				PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOI)	ANALYSIS DATE	ORDER #
Prep Batch #	: 8168278					•	
Calcium	574000 N	100000	ug/L	SW846	6020	06/16-06/25/08	KPF631AD
		Dilution Facto	or: 1000	Analysis	Time: 17:38		
Iron	ND N	50000	ug/L	SW846	6020	06/16-06/25/08	KPF631AE
·		Dilution Facto	r: 1000	Analysis	Time: 17:38		
Potassium	586000 N	100000	ug/L	SW846	6020	06/16-06/25/08	KPF631AF
		Dilution Facto	or: 1000	Analysis	Time: 17:38		
Magnesium	1960000 N	50000	ug/L	·		06/16-06/25/08	KPF631AG
		Dilution Facto	r: 1000	Analysis	Time: 17:38		
Manganese	ND N	2000	ug/L	SW846	6020	06/16-06/25/08	KPF631AH
		Dilution Facto	r: 1000	Analysis	Time: 17:38		
Sodium	16300000 N	500 00	ug/L	SW846	6020	06/16-06/25/08	KPF631AJ
		Dilution Facto	r: 1000	Analysis	Time: 17:38		
Silicon	62100 BN	250000	ug/L	SW846	6020	06/16-06/25/08	KPF631AK
		Dilution Facto	or: 1000	Analysis	Time: 17:38		
•				•			
Prep Batch #					•		
Silica	133000 J,B	250000	ug/L	SW846		06/16-06/25/08	KPF631AL
		Dilution Facto	or: 1000 ·	Analysis	Time: 17:38	•	

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

J Estimated result. Result is less than RL.

B The associated method blank contains thetarget analyte at a reportable level.

MACTEC Engineering & Consulting Inc

Client Sample ID: OW-6211

General Chemistry

Lot-Sample #...: F8F050344-001 Work Order #...: KPF63
Date Sampled...: 06/04/08 14:20 Date Received..: 06/05/08

Matrix.... WATER

•	•					PREPARATION-	PREP		
PARAMETER	RESULT	RL_	UNITS	METHO	D	ANALYSIS DATE	BATCH #		
pH (liquid)	7.2	0.10	No Units	SW846	9040	06/05/08	8158106		
		Dilution Fact	or: 1	Analysis	Time: 00:00				
Bicarbonate Alkalinity	181	5.0	mg/L	MCAWW	310.1	06/10/08	8161269		
-		Dilution Fact	or: 1	Analysis	Time: 00:00				
Bromide	65.9	50.0	mg/L		300.0A	06/05/08	8175487		
	•	Dilution Fact	or: 200	Analysis	Time: 08:25				
Carbonate Alkalinity	ND	5.0	mg/L		310.1	06/10/08	8161267		
		Dilution Fact	or: 1	Analysis	Time: 00:00				
Chloride	31300	J 2000	mg/L	MCAWW	300.0A	06/05/08	8175488		
		Dilution Factor	or: 10000	Analysis	Time: 08:49	· ·			
Fluoride	ND	20.0	mg/L	· MCAWW	300.0A	06/05/08	8175489		
		Dilution Fact	or: 200	Analysis	Time: 08:25				
Ion Balance Difference	2.8	0.10	%	SM18	1030F & API	07/01/08	8183319		
		Dilution Fact	or: 1	Analysis	Time: 00:00				
Nitrate	ND	0.20	mg/L		300.0A	06/05/08	8158391		
		Dilution Fact	or: 10	Analysis	Time: 08:13				
Nitrite	ND	200	mg/L	MCAWW	300.0A	06/05/08	8158392		
		Dilution Fact	or: 10000	Analysis	Time: 08:49		•		
Nitrogen, as Ammonia	1300	100	ug/L		350.1	06/06/08	8156506		
		Dilution Fact	or: 2	Analysis	Time: 00:00				
Sulfate	3610	500	mg/L	MCAWW	300.0A	06/05/08	8175490		
		Dilution Fact	or: 1000	Analysis	Time: 08:37				
Total Alkalinity	181	5.0	mg/L	SM18	2320 B	06/10/08	8161265		
		Dilution Fact	or: 1	Analysis	Time: 00:00				
Total Dissolved Solids	52800	500	mg/L	MCAWW	160.1	06/11-06/12/08	8163486		
		Dilution Fact	or: 100	Analysis	Time: 00:00				

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

TOTAL Metals

			1100410	•	
Client Lot #	: F8F05034	4		Matrix WA	TER
PARAMETER	RESULT	REPORTING LIMIT UNI	is method	PREPARATION- ANALYSIS DATE	WORK ORDER #
MR Lot-Sample	- #- F8F16000	0-278 Prep Batch	¥= 8168278	•	
Calcium	ND B	100 ug/l Dilution Factor: 1 Analysis Time: 17	L SW846 602	0 06/16-06/25/08	KP13D1AA
Iron	ND	50 ug/l Dilution Factor: 1 Analysis Time: 17	·	06/16-06/25/08	KP13D1AC
Magnesium	N D	50 ug/l Dilution Factor: 1 Analysis Time.: 17		06/16-06/25/08	KP13D1AE
Manganese	ND	2 ug/I Dilution Factor: 1 Analysis Time: 17		06/16-06/25/08	KP13D1AF
Potassium	ND	100 ug/l Dilution Factor: 1 Analysis Time: 17	•	06/16-06/25/08	KP13D1AD
Silicon	67.1 B	250 ug/l Dilution Factor: 1 Analysis Time: 17		06/16-06/25/08	KP13D1AH
Sodium	ND -	50 ug/l Dilution Factor: 1 Analysis Time: 17		06/16-06/25/08	KP13D1AG
•					
MB Lot-Sample	e #: F8F23000	0-115 Prep Batch	# : 8175115		
Silica	1 44 J	250 ug/l Dilution Factor: 1 Analysis Time: 17		0 06/16-06/25/08	KQL7H1AA

MOTTE (S)

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #: F8F050344		Matrix WATER				
PARAMETER Bicarbonate	RESULT	REPORTING LIMIT UNITS Work Order #: KPLC11AA	METHOD MB Lot-Sample #:	PREPARATION- ANALYSIS DATE F8F090000-269	PREP BATCH #	
Alkalinity	ND	5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MCAWW 310.1	06/10/08	8161269	
Bromide	ND	Work Order #: KQG151AA 0.25 mg/L Dilution Factor: 1 Analysis Time: 07:51	MB Lot-Sample #: MCAWW 300.0A	F8F230000-487 06/05/08	8175487	
Carbonate Alkalini	Lty ND	Work Order #: KPLCR1AA 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MB Lot-Sample #: MCAWW 310.1	F8F090000-267 06/10/08	8161267	
Chloride	0.026 B	Work Order #: KQG161AA 0.20 mg/L Dilution Factor: 1 Analysis Time: 07:51	MB Lot-Sample #: MCAWW 300.0A	F8F230000-488 06/05/08	8175488	
Fluoride	ND	Work Order #: KQG191AA 0.10 mg/L Dilution Factor: 1 Analysis Time: 07:51	MB Lot-Sample #: MCAWW 300.0A	F8F230000-489 06/05/08	8175489	
Nitrate	ND	Work Order #: KPM9F1AA 0.020 mg/L Dilution Factor: 1 Analysis Time: 07:51	MB Lot-Sample #: MCAWW 300.0A	F8F060000-391 06/05/08	8158391	
Nitrite	ND	Work Order #: KPM9K1AA 0.020 mg/L Dilution Factor: 1 Analysis Time: 07:51	MB Lot-Sample #: MCAWW 300.0A	F8F060000-392 06/05/08	8158392	
Nitrogen, as Ammor	nia ND	Work Order #: KPD7ClAA 50.0 ug/L Dilution Factor: 1 Analysis Time: 00:00	MB Lot-Sample #: MCAWW 350.1	F8F040000-506 06/06/08	8156506	
Sulfate	ND	Work Order #: KQG2C1AA 0.50 mg/L Dilution Factor: 1 Analysis Time: 07:51	MB Lot-Sample #: MCAWW 300.0A	F8F230000-490 06/05/08	8175490	

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8F050344

Matrix..... WATER

PARAMETER	RESULT	REPORTING	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	ND	Work Order 5.0 Dilution Fact Analysis Time		MB Lot-Sample #: SM18 2320 B	F8F090000-265 06/10/08	8161265
Total Dissolved Solids	. MD	Work Order 5.0 Dilution Fact Analysis Time	mg/L	MB Lot-Sample #: MCAWW 160.1	F8F110000-486	8163486

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	F8F050344	•		Matrix	: WATER
		RECOVERY		PREPARATION-	TIODEL ORDER II
PARAMETER	RECOVERY	LIMITS	METHOD	ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#:	F8F160000-	278 Prep Ba	tch #: 8168278	}	
Calcium	104		SW846 6020		KP13D1AJ
		Dilution Facto	or: 1 Analysi	s Time: 17:34	
Iron	107	(85 - 115)	SW846 6020	06/16-06/25/08	KP13D1AK
——————————————————————————————————————			or: 1 Analysi		
Potassium	105		SW846 6020 or: 1 Analysi		KP13D1AL
		Dilucion Facto	or: I Analysi	s Time: 17:34	
Magnesium	102	(85 - 115)	SW846 6020	06/16-06/25/08	KP13D1AM
		Dilution Facto	or: 1 Analysi	s Time: 17:34	
Manganese	110	/85 - 115)	SW846 6020	06/16-06/25/08	זוג ורוב ועד
Manganese			or: 1 Analysi		MI IDDIM
		•			
Sodium	102		SW846 6020		KP13D1AP
		Dilution Facto	or: 1 Analysi	s Time: 17:34	
Silicon	113	(85 - 115)	SW846 6020	06/16-06/25/08	KP13D1AQ
	• .	Dilution Facto	or: 1 Analysi	s Time: 17:34	
TOO T. (d7.)			L_1 4 01 DT 21 1		
LCS Lot-Sample#: Silica			.t.ch #: 8175115 SW846 6020		KOL7H1AC
DILICA	113 H		or: 1 Analysi		1027111110

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: F8F050344

Matrix WATER

	PERCENT	RECOVERY	RPD		PREPARATION-	PREP
PARAMETER	RECOVERY	LIMITS RPD	LIMITS	METHOD	ANALYSIS DATE	BATCH #
Nitrogen, as	Ammonia	WO#: KPD7ClA	C-LCS/KPI	7C1AD-LCSD LCS	Lot-Sample#: F8F0	40000-506
	103	(90 - 110)		MCAWW 350.1	06/06/08	8156506
	100	(90 - 110) 2.7	(0-20)	MCAWW 350.1	06/06/08	8156506
		Dilution Wa	ctor: 1	Analysis Time.	.: 00:00	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #: F8F050344 Matrix: WATE				
PARAMETER ph (liquid)	RECOVERY	Work Order #: KPGWD1AA LCS Lot-Sample#: F8F060000-106		
	100	(99 - 101) SW846 9040 06/05/08 8158106 Dilution Factor: 1 Analysis Time: 00:00		
Bicarbonate Alkalinity		Work Order #: KPLC11AC LCS Lot-Sample#: F8F090000-269		
	101	(90 - 110) MCAWW 310.1 06/10/08 8161269 Dilution Factor: 1 Analysis Time: 00:00		
Bromide	101	Work Order #: KQG151AC LCS Lot-Sample#: F8F230000-487 (90 - 110) MCAWW 300.0A 06/05/08 8175487 Dilution Factor: 1 Analysis Time: 07:41		
Carbonate Alka	linity 101	Work Order #: KPLCR1AC LCS Lot-Sample#: F8F090000-267 (90 - 110) MCAWW 310.1 06/10/08 8161267 Dilution Factor: 1 Analysis Time: 00:00		
Chloride	98	Work Order #: KQG161AC LCS Lot-Sample#: F8F230000-488 (90 - 110) MCAWW 300.0A 06/05/08 8175488 Dilution Factor: 1 Analysis Time: 07:41		
Fluoride	99	Work Order #: KQG191AC LCS Lot-Sample#: F8F230000-489 (90 - 110) MCAWW 300.0A 06/05/08 8175489 Dilution Factor: 1 Analysis Time: 07:41		
Nitrate	101	Work Order #: KPM9F1AC LCS Lot-Sample#: F8F060000-391 (90 - 110) MCAWW 300.0A 06/05/08 8158391 Dilution Factor: 1 Analysis Time: 07:41		
Nitrite	100	Work Order #: KPM9K1AC LCS Lot-Sample#: F8F060000-392 (90 - 110) MCAWW 300.0A 06/05/08 8158392 Dilution Factor: 1 Analysis Time: 07:41		
Sulfate	95	Work Order #: KQG2ClAC LCS Lot-Sample#: F8F230000-490 (90 - 110) MCAWW 300.0A 06/05/08 8175490 Dilution Factor: 1 Analysis Time: 07:41		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

101

Total Alkalinity

(90 - 110) SM18 2320 B

Dilution Factor: 1

Work Order #: KPLCP1AC LCS Lot-Sample#: F8F090000-265

Analysis Time..: 00:00

06/10/08

8161265

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F8F050344 Matrix.....: WATER

Date Sampled...: 06/04/08 14:20 Date Received..: 06/05/08

PARAMETER	PERCENT RECOVERY	•	RPD LIMITS	METHOL)	PREPARATION- ANALYSIS DATE	WORK ORDER #
MC Tot Compl	o #. Poras	0344-001 Prep Ba	tah fi	- 9169	2770		
Calcium	. 0 N	(75 - 125)		SW846		06/16-06/25/08	KDECSIND
Calcium	0 10			SW846		06/16-06/25/08	
	0 11	Dilution Facto	•	D010	0020	00/10 00/25/00	1011031113
		Analysis Time.				. •	
		•					
Iron	0 1/1	(75 - 125)		SW846	6020	06/16-06/25/08	KPF631CA
	0 N	(75 - 125) 0.0	(0-20)	SW846	6020	06/16-06/25/08	KPF631CC
	•	Dilution Facto	r: 1000			,	
		Analysis Time.	.: 17:45				
Magnesium	0 N	(75 - 125)		SW846		06/16-06/25/08	
•	0 N	(75 - 125) 0.0		SW846	6020	06/16-06/25/08	KPF631CG
		Dilution Facto					
		Analysis Time.	.: 17:45	•			•
Manganaga	117	(75 - 125)		SW846	6030	06/16-06/25/08	KDDC21CU
Manganese	130 N		•	SW846		06/16-06/25/08	
•	120 K	Dilution Facto	•	2W0#0	0020	06/16-06/25/06	VEL 62TC0
		Analysis Time.					
		Andrysts time.	17.45				•
Potassium	0 N	(75 - 125)	•	SW846	6020	06/16-06/25/08	KPF631CD
	17 N	(75 - 125) 0.0		SW846		06/16-06/25/08	
	•	Dilution Facto	•				
•		Analysis Time.	.: 17:45				
Silicon	85 B	(75 - 125)	•	SW846	6020	06/16-06/25/08	KPF631CM
	0 N	(75 - 125) 0.0	(0-20)	SW846	6020	06/16-06/25/08	KPF631CN
		Dilution Facto	or: 1000				
•		Analysis Time.	: 17:45				•
0 a 4	0.37	(75 105)		CITAD 4 C	C020 :	06/16 06/05/00	
Sodium	0 10	(75 - 125)		SW846		06/16-06/25/08 06/16-06/25/08	
	0 N	,		SW846	0020	00/10-00/25/08	KPF631CL
		Dilution Facto					
		Analysis Time.	: 1/:45				

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8F050344 Matrix.....: WATER

Date Sampled...: 06/04/08 14:20 Date Received..: 06/05/08

PARAMETER Bromide	PERCENT RECOVERY 92	RECOVERY PREPARATION - PREP LIMITS METHOD ANALYSIS DATE BATCH # Work Order #: KPF631CP MS Lot-Sample #: F8F050344-001 (90 - 110) MCAWW 300.0A 06/05/08 8175487 Dilution Factor: 200 Analysis Time: 08:25
Chloride	97	Work Order #: KPF631CR MS Lot-Sample #: F8F050344-001 (90 - 110) MCAWW 300.0A 06/05/08 8175488 Dilution Factor: 10000 Analysis Time: 08:49
Fluoride	100	Work Order #: KPF631CU MS Lot-Sample #: F8F050344-001 (90 - 110) MCAWW 300.0A 06/05/08 8175489 Dilution Factor: 200 Analysis Time: 08:25
Nitrate	93	Work Order #: KPF631A2 MS Lot-Sample #: F8F050344-001 (90 - 110) MCAWW 300.0A 06/05/08 8158391 Dilution Factor: 10 Analysis Time: 08:13
Nitrite	102	Work Order #: KPF631A4 MS Lot-Sample #: F8F050344-001 (90 - 110) MCAWW 300.0A 06/05/08 8158392 Dilution Factor: 10000 Analysis Time: 08:49
Nitrogen, as Am	monia 96	Work Order #: KPC951C5 MS Lot-Sample #: F8F040293-001 (90 - 110) MCAWW 350.1 06/06/08 8156506 Dilution Factor: 1 Analysis Time: 00:00
Sulfate	100	Work Order #: KPF631CW MS Lot-Sample #: F8F050344-001 (90 - 110) MCAWW 300.0A 06/05/08 8175490 Dilution Factor: 1000 Analysis Time: 08:37
Total Alkalinit	Y 92	Work Order #: KPF631A0 MS Lot-Sample #: F8F050344-001 (80 - 120) SM18 2320 B 06/10/08 8161265 Dilution Factor: 1 Analysis Time: 00:00

NOTE(S):

General Chemistry

Client Lot #...: F8F050344

Work Order #...: KPC95-SMP

Matrix....: WATER

KPC95-DUP

Date Sampled...: 06/02/08 09:46 Date Received..: 06/04/08

PARAM RESULT	DUPLICATE RESULT	UNITS	RPD_	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrogen, as Ammo	onia				SD Lot-Sample #:	F8F040293-001	
190	160	ug/L	14	(0-20)	MCAWW 350.1	06/06/08	8156506
		Dilution Fac	tor: 1	Ana	alysis Time: 00:00	·	

General Chemistry

Client Lot #...: F8F050344

Work Order #...: KN9V9-SMP

Matrix..... WATER

KN9V9-DUP
Date Sampled...: 06/02/08 07:50 Date Received..: 06/03/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8F030220-002	PREP BATCH #
57.0	56.0	mg/L	1.8	(0-15)	MCAWW 310.1	06/10/08	8161269
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		
Carbonate Alkal:	inity				SD Lot-Sample #:	F8F030220-002	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/10/08	8161267
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		

General Chemistry

Client Lot #...: F8F050344

Work Order #...: KPF63-SMP

Matrix....: WATER

KPF63-DUP

Date Sampled...: 06/04/08 14:20 Date Received..: 06/05/08

	DUPLICATE	•		RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Bromide					SD Lot-Sample #:	F8F050344-001	
65.9	65.0	mg/L	1.5	(0-20)	MCAWW 300.0A	06/05/08	8175487
	•	Dilution Fac	tor: 200	Ana	alysis Time: 08:25		
					•		
Chloride					SD Lot-Sample #:		
31300 J	32900				MCAWW 300.0A	06/05/08	8175488
		Dilution Fac	tor: 100	00 Ana	alysis Time: 08:49		
Fluoride		•			SD Lot-Sample #:	TOTO E 0 2 4 4 0 0 1	
ND	ND	mg/L	Λ.	(0-20)	MCAWW 300.0A		8175489
מאז	ND	_			alysis Time: 08:25		61/5469
		DIIUCION FAC	COI: 200		riysis Time 00:25		
Sulfate	•				SD Lot-Sample #:	F8F050344-001	
3610	3600	mg/L	0.34	(0-20)	MCAWW 300.0A		8175490
	•	Dilution Fac			alysis Time: 08:37	• •	
				,			
Nitrite					SD Lot-Sample #:	F8F050344-001	•
ND	ND	_			MCAWW 300.0A	06/05/08	8158392
•		Dilution Fac	tor: 100	00 Ana	alysis Time: 08:49		
1.							
Nitrate			_	(0.00)	SD Lot-Sample #:		
ND	ND				MCAWW 300.0A	06/05/08	8158391
	•	Dilution Pac	tor: 10	Ana	alysis Time: 08:13		
Total Alkalinity					SD Lot-Sample #:	E0E0E0344_001	
181	183	mg/L	7 1	(0-20)	SM18 2320 B		8161265
	103	Dilution Fac			alysis Time: 00:00	00/10/00	0101200
		Dilucion Fac	COL. I		arysis fime 00.00		
pH (liquid)		•			SD Lot-Sample #:	F8F050344-001	
7.2	7.2	No Units	0.0	(0-0.0)	SW846 9040		8158106
		Dilution Fac			alysis Time: 00:00	, ,	
					-		

NOTE (S):

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

F8F050344

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-131-132,M

Project Manager: IV

Quote #: 79192

MACTEC Engineering & Consulting Inc

Date Received:

2008-06-05 2008-06-24

Project:

6468071950

FPL Turkey Point COL

Analytical Due Date:

PO#:

Report Due Date:

2008-06-26

Client:

200807151 63036

Report to: Al Tice

Report Type: W

#SMPS in LOT: 1

EDD Code: 00

Inform PM of any receiving issues.

SA	MPL	E#	CLIE	NT SAMPL	EID	Site ID	Client Matrix	DATE/T	IME SAMPLED	WORKOR	DER	Ţ	_	-
1			OW-62	211				2008-06-0	04 / 1420	KPF63	W	ATER		
SA	MPL	E CC	OMME	VTS:										
F	E	MH	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06		
Y	α	МН	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06		
ħ	ΙG	МН	SW846	602 0	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06		
D	ΛN	МН	SWB46	6020	WATER, 8020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06		
ħ	NA.	МН	SW848	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06		
5	ŠΑ	мн	SW846	6020	WATER, Silica by calculation	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06		
. 9	31	МН	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC.	06		
C	CA	МН	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	.06		•;
٠)	ΚX	ΑK	MCAW	160.1	WATER, 180.1, Solids, Filterable TDS"	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	•	1
•	¢χ	C8	MCAW	300.0A	WATER, 300.0A, Fluoride	. 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
)	ΚX	C9	MCAW	300.0A	WATER, 300.0A, Nitrate N	as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
>	CΧ	СВ	MCAW	310.1	WATER, 310.1; Alkalinity Carbonate	· 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
>	ΚX	СХ	MCAW W	300,0A	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
)	CX	CY	MCAW	300.0A	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
)	ĊΧ	FJ	SW846	9040	WATER, 9040C, pH	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
. >	CX	GM	MCAW	300,0A	WATER, 300.8A, Bromids	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
)	CX	GO	MCAW	300.0A	WATER, 300.0A, Nibite:	as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
)	ΚX	LV	SM18	2320 B	WATER, 2320 B, Alkalin Total	ity, 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	0 6 .		
>	ΚX	SL	SM18	1030F & API	WATER, 1030F & API, le Balance	X0 nc	CALCULATION	01	STANDARD TEST SET	PROT: A	WRK	06		
,	ΚX	UX	MCAW W		WATER, 310.1, Alkalinity Bicarbonate	r. 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
,	ΚX	VM	MCAW W	350.1	WATER, 350.1, Nitrogen Ammonia	. 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
s >	ΚX	C9		A0.00£	WATER, 300.0A, Nitrate N	as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
s	CX	GO	MCAW	300.0A	WATER, 300.0A, Nitrite N	as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
s	ΧX	LV	SM18	2320 B	WATER, 2320 B, Alkalin Total	ily, 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		
X)	ΚX	C9	MCAW W	300,0A	WATER, 300.0A, Nitrate	as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		٠,
X X	XX	FJ	SW846	9040	WATER, 9040C,	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		1
× 3	XX	GO	MCAW W	300.0A	WATER, 300.0A, Nitrite N	as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		•
x. ;	XX	LV	SM18	2320 B	WATER, 2320 B, Aikelin Total	ity. 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06		

TestAmerica - St. Louis

Logged in by:

DANIELSB 2008-06-06 7:57:45

printed on: Wednesday, June 11, 2008 03:30 P

Page 1 of 1

rul 3550

Chain of Custody Record

Temperature on Receipt

Test	Ar	ner	ica

rinking Water?	Yes □	No.X	THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)																													
. Gilent MACTEC		Project	Mani	ager	Å	عرم	ref	2							•		•	Di	ate)(o-7	ว 4		7 8		Chal	n of Custo	dy Nun 2 <u>/</u> 1 (ber 36	
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City Raleigh State Zip	Code 17604	Site Co	ntact	Coc	RE	,		b Con			'nı	<u>م</u>		#	ŭζ,	d m		alys re sp											
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Project Name and Location (State) TUYKEY POINT COL Contract/Purchase Order/Quote No. 6469-07-1950	·····				atrix		Ť		Con	taine serva	us &				3	39										Cond	iai ins itions	truction of Rec	ns/ eipt
Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	į	Афинали	Sec.	ğ	Unbras	H2804	HNO3	ĄĊ	NaOH	NaOH	t	782		い				ty2	50	M)		ے	Atino!	cal	CIUM	_1
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Possible Hazard Identification	<u> </u>		LI Sz	ample	Disp	osal .	J	ـــــ	لــــا						J	l		1						l_	_ـــــــــــــــــــــــــــــــــــــ				
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant	Poison B	Unknown					nt	X						\rchi\	ve F	or			Mont	hs			ay be an 1 r			if samples	are ret	ained 	
Turn Around Time Required 24 Hours 48 Hours 7 Days 14 Days	ays 🕅 21 Days	□ o#	ner 5	terre	dec	d						(Spec	cify)											•					
1. Reliquished By Church Swith		Date Date	1-10	<u> </u>	Tlme		-	1. F	Becel	ved E	2	P													Da	15/04		me 9915 me	
2. Relinquished By		Date	-421	ر_د 	Time	, ,		2.F	lecei	ved E	Зу							•							Da	e V	77	me	
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Comments		<u> </u>		!				.L			•		_												1				
Dietroiphition, willite Debined to Olient with Beauty	CANADY Clave w	th the Com	-/o. /	DIMIZ	Elal	d Con							<u> </u>																

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Cop

TestAme		- 3550 - 505050539 %,	· · · · · · · · · · · · · · · · · · ·
THE LEADER IN ENVIRONM	ental testing		
Client: Nact	COC/RFA No:	Condition Upon Receipt Form Ob 2.4 bb Time: 0915	
	Shi	oping Information	
Shipper Name:	FÉ 5	Multiple Packages Y N Sample Temperature (s):** 1. 6. 2. 7. 3. 8. 4. 9. 5. 10.	
Numbered shipping lines	correspond to Numbered Sample Temp lines	**Sample must be received at 4°C±2°C- If not, note contents below. Temper variance does NOT affect the following: Metals-Liquid or Rad tests- Liquid or	rature or Solids
Condition (Circle "Y" 1. Y N	for yes, "N" for no and "N/A" for not applicable. Are there custody seals present on the cooler?	8. Y N Are there custody seals present on bottles?	 ?
2. Y N N/A	Do custody seals on cooler appear to be tampered with?	9. Y N Do custody seals on bottles appear to be ta with?	mpered
3. (Y) N	Were contents of cooler frisked after opening, but before unpacking?	10. N N/A Was sample received with proper pH!? (If make note below)	not,
4. (Y) N	Sample received with Chain of Custody?	11. Y N If N/A- Was pH taken by original TestAm lab?	ierica
5. (Y) N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. YN Sample received in proper containers?	
6. Y (N)	Was sample received broken?	13. Y N WA Headspace in VOA or TOX liquid samples Yes, note sample ID's below)	s? (If
7. (Y)N	Is sample volume sufficient for analysis?	14. Y N Was Internal COC/Workshare received?	
For DOE-AL (Pantex, L		ed must be verified, EXCEPT VOA, TOX and soils.	
Notes:			
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Corrective Action:		Informed by:	·
☐ Sample(s) proce ☐ Sample(s) on he		If released, notify:	
Project Managemen	at Review:	Date: 6-6-8 BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHE	יבו מנו
THE INITIATOR, THE	n that person is required to apply t	S BEING CHECKED IN. IF ANY THEM IS COMPLETED BY SOMEONE OTHE. HEIR INITIAL AND THE DATE NEXT TO THAT ITEM. MIN-0004, REVISED 08/06/07/\Sisvr01\QA\FORMS\ST-LOUIS\ADMIN\Admin(



DOCUMENTATION OF TECHNICAL REVIEW SUBCONTRACTOR WORK PRODUCT

Project Name: Turkey Point COL Project

Project Number: 6468-07-1950

Project Manager: Scott Auger

Project Principal: Tom McDaniel

The report described below has been prepared by the named subcontractor retained in accordance with the MACTEC QAPD. The work and report have been reviewed by a MACTEC technically qualified person. Comments on the work or report, if any, have been satisfactorily addressed by the subcontractor. The attached report is approved in accordance with section QS-7 of MACTEC's QAPD.

The information and data contained in the attached report are hereby released by MACTEC for project use.

REPORT: Analytical Report Lot #: F8E280143	<u>3_rev1</u>	
SUBCONTRACTOR: TestAmerica, Earth City,	<u>MO</u>	
DATE OF ACCEPTANCE : 7/25/2008		
TECHNICAL REVIEWER: William S. Grimes	With 1. si	
SENIOR PROJECT PRINCIPAL: J. Allan Tice	Allan Ini	





Client Bechtel Power Corp. Laboratory TestAmerica Inc.

MACTEC Project <u>6468-07-1950</u> Data Report Number/Date <u>Lot# F8E280143 rev1/ 6-27-08</u>

	LABORATORY DATA REVIEW CHECKLIST	YES	<u>NO</u>	<u>NOT</u> <u>APPLICABLE</u>
1.	Laboratory analytical data report appears complete (all data results present for all samples submitted for analysis) and there are no apparent transcription errors:		<u>√</u> 1	
2.	Samples analyzed within applicable holding times (based on date of sample collection):*		<u>√²</u>	
3.	Trip blanks, field blanks or laboratory method blanks are free of blank contamination:		<u>√³</u>	
4.	If field duplicate samples collected, calculated results meet Relative Percent Difference guidelines: **			<u>✓</u>
5.	Surrogate recoveries (organic analyses only) within laboratory reported recovery acceptance ranges:			<u>✓</u>
6.	If Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples required to meet project objectives, Percent Recoveries (%R) and Relative Percent Difference (RPD) within laboratory reported acceptance ranges:		<u> </u>	
7.	Reported detection limits meet project objectives (e.g., are capable of achieving applicable site standards):	<u>~</u>		
8.	Completed Chain-Of-Custody received noting sample/custody seal condition (with airbill, if appropriate):	<u>✓</u>		
9.	Analytical costs within authorized budget for these services:			<u></u> ✓
Notes:	COMMENTS: ¹ Iron results should be flagged indicating method blank contamination. ² Samples OW-735U and OW-8090 stored under refrigeration, biological degradation should not have been an issue. ³ An estimated concentration of iron between the PQL and MDL. Iron concentrations in site samples were considerably higher, and likely reflect ambient aquitimits for several analytes possibly due to matrix interference. QC established based on acceptable LCS recoveries and results through 7, a more detailed Data Validation may be required, and a person knowledgeable in Data Validation protocols used if the project scope requires Data Validation from the onset. 2. *= Based upon EPA Guidance and the applicable analytical method references. See reverse side of checklist for contact the project scope requires Data Validation from the onset.	was detect sifer conditi sults for ana d to one or a should be of details.	ed in the mons. ⁴ MS/M lytes with ac more of the consulted.	ethod blank, at a concentration 1SD recoveries were outside QC ceptable recoveries. above checklist questions 1 This checklist should not be
	3. ** = Based upon EPA Guidance. Use these criteria on duplicate and sample results which exceed five times the redetails. Checked by:	ported detec	tion limit, S	See reverse side of checklist for



ANALYTICAL REPORT

REVISED

PROJECT NO. 6468071950

FPL Turkey Point COL

Lot #: F8E280143

Al Tice

MACTEC Engineering and Cons. 3301 Atlantic Ave. Raleigh, NC 27604

TESTAMERICA LABORATORIES, INC.

Ivan Vania Project Manager

June 27, 2008

Case Narrative

LOT NUMBER: F8E280143 - Revision 1

This report contains the analytical results for the two samples received under chain of custody by TestAmerica St. Louis on May 28, 2008. These samples are associated with your FPL Turkey Point COL project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

This revision contains corrections to the TDS mass listed in the case narrative.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP-MS (SW846-6020)

Batch 8155134:

The MS (MSD) recoveries for calcium, potassium, magnesium, and sodium are outside the established QC limits. The analyte concentrations in the original samples are greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8E280143 (1): 0W-735U F8E280143 (2): 0W-809U

Batch 8155134:

The MS (MSD) recovery for iron is outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery. No further action is required.

Affected Samples:

F8E280143 (1): 0W-735U F8E280143 (2): 0W-809U

Batch 8155134:

The MS (MSD) recovery for silicon is outside the established QC limits. Matrix interference is physically evident in the sample. The samples are high in salts. Method performance is demonstrated by acceptable LCS recovery

Affected Samples:

F8E280143 (1): 0W-735U F8E280143 (2): 0W-809U

Batch 8155134:

The Measured Intensity Mean for lead, as measured during the daily performance check, was low. However, the calibration and the second source checks were all within acceptable QC limits. The samples were reported with this narrative.

Affected Samples:

F8E280143 (1): 0W-735U F8E280143 (2): 0W-809U

Batch 8155134:

The samples were analyzed at a dilution due to high concentrations of salts. The reporting limits were adjusted for the dilution.

Affected Samples:

F8E280143 (1): 0W-735U F8E280143 (2): 0W-809U

Total Dissolved Solids (MCAWW 160.1)

Batch 8156338:

Initial results exceeded the SOP limit of 200mg. The samples were re-analyzed at a 100X dilution out of hold.

Affected Samples:

F8E280143 (1): 0W-735U F8E280143 (2): 0W-809U

Anions (MCAWW 300.0A)

Poor matrix spike recovery for Chloride in batch 8165334, Nitrite in batch 8165337, and Ortho Phos in batch 8165338 is attributed to matrix interference. The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries.

Affected Samples:

F8E280143 (1): 0W-735U F8E280143 (2): 0W-809U

The MS recoveries for Bromide in batch 8165345, Chloride in batch 8165346, Fluoride in batch 8165347, Sulfate in batch 8165348, Nitrite in batch 8165349, and Nitrate in batch 8165350 are outside the established QC limits. Matrix interference is evident in the sample. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8E280143 (1): 0W-735U F8E280143 (2): 0W-809U

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F8E280143

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
pH Aqueous	SW846 9040	SW846 9040
Alkalinity, Total	SM18 2320 B	SM18 2320 B
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Ion Balance % Difference	SM18 1030F & AP	SM18 1030F & AP
ICP-MS (6020)	SW846 6020	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F8E280143

WO # 8	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KNX8K	001 002	0W-735U 0W-809U	05/27/08 05/27/08	
Note (s)	:		 	

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

MACTRC Engineering & Consulting Inc

Client Sample ID: 0W-735U

TOTAL Metals

Lot-Sample #...: F8E280143-001 Matrix.....: WATER

Date Sampled...: 05/27/08 11:35 Date Received..: 05/28/08

		REPORTING				PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO:	D	ANALYSIS DATE	ORDER #
Prep Batch #	: 8155134					•	
Calcium	749000 N	100000	ug/L	SW846	6020	06/11-06/24/08	KNX8D1AN
		Dilution Facto	or: 1000	Analysis	Time: 15:45		
Iron	133 N	100	ug/L	SW846	6020	06/11-06/17/08	KNX8D1AP
		Dilution Facto	or: 2	Analysis	Time: 02:09		
Potassium	655000 N	100000	ug/L	SW846	6020	06/11-06/21/08	KNX8D1AQ
		Dilution Facto	or: 1000	Analysis	Time: 22:10		
Magnesium	2140000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KNX8D1AR
		Dilution Facto	r: 1000	Analysis	Time: 22:10		
Manganese	32.7	4	ug/L	SW846	6020	06/11-06/17/08	KNX8D1AT
		Dilution Facto	or: 2	Analysis	Time: 02:09		
Sodium	17700000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KNX8D1AU
		Dilution Facto	or: 1000	Analysis	Time: 22:10		
Silicon	ND N	250000	ug/L	SW846	6020	06/11-06/21/08	KNX8D1AV
		Dilution Facto	or: 1000	Analysis	Time: 22:10		
			*				
Prep Batch #			,		•		
Silica	ND	250	ug/L	SW846		06/11-06/21/08	KNX8D1AW
		Dilution Facto	or: 1	Analysis	Time: 00:00		

NOTE (S):

N Spiked analyte recovery is outside stated control limits.

MACTEC Engineering & Consulting Inc

Client Sample ID: 0W-735U

General Chemistry

Lot-Sample #...: F8E280143-001 Work Order #...: KNX8D Matrix.....: WATER

Date Sampled...: 05/27/08 11:35 Date Received..: 05/28/08

Da Da Million	DECIT III	DI	INTEG	METELO	D	PREPARATION-	PREP
PARAMETER	RESULT	RL 2.70	No Units	METHO		ANALYSIS DATE	BATCH #
pH (liquid)	7.0	0.10		SW846		05/28/08	8149223
•		Dilution Facto	or: 1	Analysis	Time: 00:00		
Bicarbonate Alkalinity	179	5.0	mg/L	MCAWW	310.1	06/02/08	8154062
		Dilution Facto	or: 1	Analysis	Time: 00:00		
Bromide	262	250	mg/L	MCAWW	300.0A	05/29/08	8165345
		Dilution Facto	or: 1000	Analysis	Time: 11:27		
Carbonate Alkalinity	ND	5.0	mg/L		310.1	06/02/08	8154061
		Dilution Facto	or: 1	Analysis	Time: 00:00		
Chloride	37500	2000	mg/L	MCAWW	300.0A	05/29/08	8165346
		Dilution Facto	or: 10000	Analysis	Time: 11:39		
Fluoride	ND	20.0	mg/L	MCAWW	300.0A	05/29/08	8165347
		Dilution Facto	or: 200	Analysis	Time: 11:14		
Ion Balance Difference	6.7	0.10	9	SM18	1030F & API	06/23/08	8175543
		Dilution Facto	or: 1	Analysis	Time: 00:00		
Nitrate	ND	4.0	mg/L	MCAWW	300.0A	05/29/08	8165350
•		Dilution Facto	or: 200	Analysis	Time: 11:14		
Nitrite	ND	200	mg/L	MCAWW	300.0A	05/29/08	8165349
		Dilution Facto	or: 10000	Analysis	Time: 11:39		
Nitrogen, as Ammonia	2150	200	ug/L	MCAWW	350.1	05/30/08	8150453
		Dilution Facto	or: 4	Analysis	Time: 00:00		
Sulfate	4090	500	mg/L	MCAWW	300.0A	05/29/08	8165348
		Dilution Facto	or: 1000	Analysis	Time: 11:27		
Total Alkalinity	179	5.0	mg/L		2320 B	06/02/08	8154059
		Dilution Facto	or: 1	Analysis	Time: 00:00		
Total Dissolved Solids	40200	500	mg/L	MCAWW	160.1	06/04-06/05/08	8156338
		Dilution Facto	or: 100	Analysis	Time: 00:00		

MACTEC Engineering & Consulting Inc

Client Sample ID: 0W-809U

TOTAL Metals

Lot-Sample # Date Sampled	Matrix:	WATER					
	PREPARATION-	WORK ·					
PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHO	D	ANALYSIS DATE	ORDER #
	·			•			
Prep Batch #	: 8155134						
Calcium	704000 N	100000	ug/L	SW846	6020	06/11-06/24/08	KNX8K1AN
		Dilution Fact	or: 1000	Analysis	Time: 15:59		
Iron	158 N	100	ug/L	SW846	6020	06/11-06/17/08	ZMZOZ1VD
THOM	130 M	Dilution Fact	•		Time: 02:24	00/11-00/17/00	MANAGALAF
		Direction Face	O1. 2	marysis	11Me 02.24	•	
Potassium	607000 N	100000	uq/L	SW846	6020	06/11-06/21/08	KNX8K1AO
		Dilution Fact	٠.	Analysis	Time: 22:26	,,,	
				_			
Magnesium	2040000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KNX8KLAR
		Dilution Fact	or: 1000	Analysis	Time: 22:26		
			_				
Manganese	28.1	4	ug/L	SW846		06/11-06/17/08	KNX8Klat
		Dilution Fact	or: 2	Analysis	Time: 02:24		
Sodium	16700000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KNX8K1 AII
		Dilution Fact		_	Time: 22:26	00, 22 00, 22, 00	
Silicon	ND N	250000	ug/L	SW846	6020	06/11-06/21/08	KNX8K1AV
		Dilution Fact	or: 1000	Analysis	Time: 22:26		
			•				
Prep Batch #			,_		,	///	
Silica	ND	250	ug/L	SW846		06/11-06/21/08	KNX8K1AW
		Dilution Fact	or: 1	Analysis	Time: 00:00		
NOTE(S):				,			
HOLD (D).							

N Spiked analyte recovery is outside stated control limits.

MACTEC Engineering & Consulting Inc

Client Sample ID: 0W-809U

General Chemistry

Lot-Sample #...: F8E280143-002 Work Order #...: KNX8K Matrix..... WATER

Date Sampled...: 05/27/08 14:55 Date Received..: 05/28/08

PARAMETER	RESULT	<u>RL</u>	UNITS	METHOI	o	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (liquid)	7.1	0.10 Dilution Factor	No Units	SW846 Analysis	9040 Time: 00:00	05/28/08	8149223
Bicarbonate Alkalinity	177	5.0	mg/L	MCAWW	310.1	06/02/08	8154062
-		Dilution Facto	or: 1	Analysis	Time: 00:00		
Bromide	241 B	250 Dilution Facto	mg/L ox: 1000		300.0A Time: 12:42	05/29/08	8165345
Carbonate Alkalinity	ND	5.0 Dilution Facto	mg/L or: 1	MCAWW Analysis	310.1 Time: 00:00	06/02/08	8154061
Chloride	35900	2000 Dilution Facto	mg/L or: 10000		300.0A Time: 12:55	05/29/08	8165346
Fluoride	ND	1.0 Dilution Facto	mg/L pr: 10		300.0A Time: 12:16	05/29/08	8165347
Ion Balance Difference	7.4	0.10	9	SM18	1030F & API	06/23/08	8175543
		Dilution Facto	or: 1	Analysis	Time: 00:00		
Nitrate	ND	4.0 Dilution Facto	mg/L or: 200		300.0A Time: 12:29	05/29/08	8165350
Nitrite	ND	200 Dilution Facto	mg/L or: 10000		300.0A Time: 12:55	05/29/08	8165349
Nitrogen, as Ammonia	2210	200 Dilution Facto	ug/L or: 4		350.1 Time: 00:00	05/30/08	8150453
Sulfate	4050	500 Dilution Facto	mg/L or: 1000		300.0A Time: 12:42	05/29/08	8165348
Total Alkalinity	177	5.0 Dilution Facto	mg/L or: 1		2320 B Time: 00:00	06/02/08	8154059
Total Dissolved Solids	34800	500	mg/L	MCAWW	160.1	06/04-06/05/08	8156338
		Dilution Facto	or: 100	Analysis	Time: 00:00		

NOTE(S):

Volume 4, Rev 2 - 10/6/2008

RL Reporting Limit

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client	T _L	.11.	_	ESE280141	2
Client	T.Of	##		FREZBUIA:	٠.

Client Lot #: F8E280143						Matrix WATER		
			PREPARATION- WORK					
PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD)	ANALYSIS DATE		
MB Lot-Sample #	: F8F030000-	-134 Prep Ba	tch #: 8	3155134				
Calcium	ND	100	ug/L	SW846	6020	06/11-06/24/08	KN8W91AA	
		Dilution Facto	or: 1					
		Analysis Time	: 15:38					
Iron	26.0 B	50	ug/L	SW846	6020	06/11-06/17/08	KNRW91 AC	
11011	20.0	Dilution Facto	•		0020	00/11 00/11/00	101151110	
		Analysis Time.						
		•						
Magnesium	ЙD	50	ug/L	SW846	6020	06/11-06/21/08	KN8W91AE	
	•	Dilution Facto	or: 1					
		Analysis Time.	: 21:52					
M	ND	2	ug/L	CMOAC	5020	05/11 05/17/00	MARKO 1 A FI	
Manganese	ND	Dilution Facto	•	SW846	6020	06/11-06/17/08	MOWSTAR	
•		Analysis Time.						
		Analysis lime.	02:01					
Potassium	ND	100	ug/L	SW846	6020	06/11-06/21/08	KN8W91AD	
		Dilution Facto	or: .1		·	•		
		Analysis Time	: 21:52					
G174	3770	250	/=	SW846	6020	06/33 06/03/00	20101101 211	
Silicon	ND	250 Dilution Facto	ug/L	SW046	6020	06/11-06/21/08	MOWSTAM	
		Analysis Time	: 21:52	•				
Sodium	ND	50	uq/L	SW846	6020	06/11-06/21/08	KN8W91AG	
	•	Dilution Facto	or: 1					
		Analysis Time	: 21:52					
						•		
MB Lot-Sample #	- FRF230000	.113 Pren Ro	tch # - 9	2175112				
Silica	ND	.250	ug/L	SW846	6020	06/11-06/21/08	KOEK81 A A	
		Dilution Facto	- '	D.110-10		, 50, 21, 00		
		Analysis Time						

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #: F8E280143				Matrix WATER				
PARAMETER	RESULT	REPORTING LIMIT	G UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #		
Bicarbonate Alkalinity	<u> </u>			MB Lot-Sample #		DITION		
ALVATIMICA	ND	5.0 Dilution Fact Analysis Time		MCAWW 310.1	06/02/08	8154062		
Bromide	ND	Work Order 0.25 Dilution Fact Analysis Time	mg/L cor: 1	MB Lot-Sample # MCAWW 300.0A	: F8F130000-345 05/29/08	8165345		
Carbonate Alkalini	ty ND	Work Order 5.0 Dilution Fact Analysis Time	mg/L cor: 1	MB Lot-Sample # MCAWW 310.1	: F8F020000-061 06/02/08	8154063		
Chloride	ND	Work Order 0.20 Dilution Fact Analysis Time	mg/L cor: 1	MB Lot-Sample # MCAWW 300.0A	: F8F130000-346 05/29/08	8165346		
Fluoride	ND	Work Order 0.10 Dilution Fact Analysis Time	mg/L cor: 1	MB Lot-Sample # MCAWW 300.0A	: F8F130000-347 05/29/08	816534		
Nitrate	ND	Work Order 0.020 Dilution Fact Analysis Time	mg/L cor: 1	MB Lot-Sample # MCAWW 300.0A	: F8F130000-350 05/29/08	8165350		
	ND	0.020 Dilution Fact Analysis Time		MCAWW 300:0A	05/29/08	816534		
Nitrogen, as Ammon	nia ND	Work Order 50.0 Dilution Fact Analysis Time	ug/L tor: 1	MB Lot-Sample # MCAWW 350.1	: F8E290000-453 05/30/08	815045		
Sulfate	ND	Work Order 0.50 Dilution Fac Analysis Tim	mg/L tor: 1	MB Lot-Sample # MCAWW 300.0A	: F8F130000-348 05/29/08	816534		

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8E280143

Matrix....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	ND			MB Lot-Sample #: SM18 2320 B	F8F020000-059 06/02/08	8154059
Total Dissolved Solids	ND	Work Order 5.0 Dilution Factor	mg/L or: 1	MB Lot-Sample #: MCAWW 160.1	F8F040000-338	8156338

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	F8E280143				Matrix	: WATER
PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD		PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: Calcium			SW846 6020)	06/11-06/24/08 Time: 15:42	KN8W91AJ
Iron	111	(85 - 115) Dilution Facto			06/11-06/17/08 Time: 02:05	KN8W91AK
Potassium	102	(85 - 115) Dilution Facto			06/11-06/21/08 Time: 21:57	KN8W91AL
Magnesium	100				06/11-06/21/08 Time: 21:57	KN8W91AM
Manganese	108	(85 - 115) Dilution Facto			06/11-06/17/08 Time: 02:05	KN8W91AN
Sodium .	98	(85 - 115) Dilution Facto			06/11-06/21/08 Time: 21:57	KN8W91AP
Silicon	105				06/11-06/21/08 Time: 21:57	KN8W91AQ
LCS Lot-Sample#: Silica		_	SW846 6020)	06/11-06/21/08 Time: 00:00	KQEK81AC

NOTE (S):

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: F8E280143

Matrix WATER

	PERCENT	RECOVERY	RPD		PREPARATION-	PREP
PARAMETER	RECOVERY	LIMITS RPD	LIMITS	METHOD	ANALYSIS DATE	BATCH #
Nitrogen, as	Ammonia	WO#:KN3VT1A	C-LCS/KN3	VT1AD-LCSD LCS	Lot-Sample#: F8E2	90000-453
	100	(90 - 110)		MCAWW 350.1	05/30/08	8150453
	99	(90 - 110) 0.7	7 (0-20)	MCAWW 350.1	05/30/08	8150453
		Dilution En	tor. 1	Amplyeis Wimo	. 00.00	

NOTE(S):

Matrix....: WATER

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client	T-O-t	.#	•	TRE28	0143

CTTETTE HOL 4.1.	. 100200145	PRICLIA WAIRA
PARAMETER	PERCENT RECOVERY	
pH (liquid)	100	Work Order #: KN5GJ1AA LCS Lot-Sample#: F8E280000-223 (99 - 101) SW846 9040 05/28/08 8149223 Dilution Factor: 1 Analysis Time: 00:00
Bicarbonate Alkalinity		Work Order #: KN7R51AC LCS Lot-Sample#: F8F020000-062
-	100	(90 - 110) MCAWW 310.1 06/02/08 8154062 Dilution Factor: 1 Analysis Time: 00:00
Bromide	104	Work Order #: KP1JC1AC LCS Lot-Sample#: F8F130000-345 (90 - 110) MCAWW 300.0A 05/29/08 8165345
		Dilution Factor: 1 Analysis Time: 09:20
Carbonate Alkal	inity 100	Work Order #: KN7RT1AC LCS Lot-Sample#: F8F020000-061 (90 - 110) MCAWW 310.1 06/02/08 8154061 Dilution Factor: 1 Analysis Time: 00:00
Chloride ·	97	Work Order #: KPlJD1AC LCS Lot-Sample#: F8F130000-346 (90 - 110) MCAWW 300.0A 05/29/08 8165346 Dilution Factor: 1 Analysis Time: 09:20
Fluoride	96	Work Order #: KPlJE1AC LCS Lot-Sample#: F8F130000-347 (90 - 110) MCAWW 300.0A 05/29/08 8165347 Dilution Factor: 1 Analysis Time: 09:20
Nitrate	104	Work Order #: KPlJJ1AC LCS Lot-Sample#: F8F130000-350 (90 - 110) MCAWW 300.0A 05/29/08 8165350 Dilution Factor: 1 Analysis Time: 09:20
Nitrite	98	Work Order #: KPlJH1AC LCS Lot-Sample#: F8F130000-349 (90 - 110) MCAWW 300.0A 05/29/08 8165349 Dilution Factor: 1 Analysis Time: 09:20
Sulfate	94	Work Order #: KP1JF1AC LCS Lot-Sample#: F8F130000-348 (90 - 110) MCAWW 300.0A 05/29/08 8165348 Dilution Factor: 1 Analysis Time: 09:20
Total Alkalinit	TY 100	Work Order #: KN7RG1AC LCS Lot-Sample#: F8F020000-059 (90 - 110) SM18 2320 B 06/02/08 8154059 Dilution Factor: 1 Analysis Time: 00:00

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8E280143

Matrix..... WATER

	PERCENT	RECOVERY		PREPARATION-	PREP
PARAMETER	RECOVERY	LIMITS	METHOD	ANALYSIS DATE	BATCH #
Total Dissolved Solids		Work Order	#: KPC5L1AC LCS Lot-	Sample#: F8F040000-	-338
	100	(86 - 115)	MCAWW 160.1	06/04-06/05/08	8156338

NOTE(S):

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot # Date Sampled		30143 7/08 11:35 Date Received.	.: 05/28/08	Matrix	: WATER
PARAMETER	PERCENT RECOVERY	RECOVERY RPD LIMITS RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sampl	e #: F8E28	0143-001 Prep Batch #	.: 8155134		
Calcium	0 N 136 N	(75 - 125) (75 - 125) 0.0 (0-20) Dilution Factor: 1000 Analysis Time: 15:52	SW846 6020 SW846 6020	06/11-06/24/08 06/11-06/24/08	
Iron	62 N 68 N	(75 - 125) (75 - 125) 6.1 (0-20) Dilution Factor: 2 Analysis Time: 02:16	SW846 6020 SW846 6020	06/11-06/17/08 06/11-06/17/08	
Magnesium	358 N 0 N	(75 - 125) (75 - 125) 0.0 (0-20) Dilution Factor: 1000 Analysis Time: 22:18	SW846 6020 SW846 6020	06/11-06/21/08 06/11-06/21/08	
Manganese	79 83	(75 - 125) (75 - 125) 4.5 (0-20) Dilution Factor: 2 Analysis Time: 02:16	SW846 6020 SW846 6020	06/11-06/17/08 06/11-06/17/08	
Potassium	122 N 0 N	(75 - 125) (75 - 125) 0.0 (0-20) Dilution Factor: 1000 Analysis Time: 22:18	SW846 6020 SW846 6020	06/11-06/21/08 06/11-06/21/08	
Silicon .	182 N 138 N,*	(75 - 125) (75 - 125) 27 (0-20) Dilution Factor: 1000 Analysis Time: 22:18	SW846 6020 SW846 6020	06/11-06/21/08 06/11-06/21/08	
Sodium	3360 N 0 N	(75 - 125) (75 - 125) 0.0 (0-20) Dilution Factor: 1000 Analysis Time: 22:18	SW846 6020 SW846 6020	06/11-06/21/08 06/11-06/21/08	

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

^{*} Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8E280143 Matrix....: WATER

Date Sampled...: 05/27/08 11:35 Date Received..: 05/28/08

PARAMETER Bromide	PERCENT RECOVERY	LIMITS METHOD	MS Lot-Sample #: F8E280143-001 05/29/08 8165345
Chloride	89 N	Work Order #: KNX8D1CH (90 - 110) MCAWW 300.0A Dilution Factor: 10000 Analysis	
Fluoride		Work Order #: KNX8D1CK (90 - 110) MCAWW 300.0A Dilution Factor: 200 Analysis	
Nitrate	40 N	Work Order #: KNX8D1CR (90 - 110) MCAWW 300.0A Dilution Factor: 200 Analysis	
Nitrite		Work Order #: KNX8D1CP (90 - 110) MCAWW 300.0A Dilution Factor: 10000 Analysis	
Nitrogen, as Am		Work Order #: KNW831AP (90 - 110) MCAWW 350.1 Dilution Factor: 1 Analysis	-
Sulfate		Work Order #: KNX8D1CM (90 - 110) MCAWW 300.0A Dilution Factor: 1000 Analysis	
Total Alkalinit	90	Work Order #: KN5J2lA2 (80 - 120) SM18 2320 B Dilution Factor: 1 Analysis	• •

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Client Lot #...: F8E280143

Work Order #...: KNX8K-SMP

Matrix....: WATER

KNX8K-DUP

Date Sampled...: 05/27/08 14:55 Date Received..: 05/28/08

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
pH (liquid)					SD Lot-Sample #:	F8E280143-002	
7.1	7.1	No Units	0.14	(0-0.0)	SW846 9040	05/28/08	8149223
	1	ilution Fact	or: 1	Ana	lysis Time: 00:00		

General Chemistry

Client Lot #...: F8E280143

Work Order # ...: KNW83-SMP

Matrix..... WATER

KNW83-DUP

Date Sampled...: 05/22/08 09:19 Date Received..: 05/24/08

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Nitrogen, as Ammo	nia				SD Lot-Sample #:	F8E270173-001	
120	140 B	ug/L	19	(0-20)	MCAWW 350.1	05/30/08	8150453
		Dilution Fact	tor: 1	Ana	llvsis Time: 00:00		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

DCN# TUR512

B Estimated result. Result is less than RL.

General Chemistry

Client Lot #...: F8E280143

Work Order #...: KN2LJ-SMP

Matrix....: WATER

Date Sampled...: 05/27/08 09:00 Date Received..: 05/28/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E290176-002	PREP BATCH #
71.0	73.0	mg/L	2.8	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fa	ctor: 1	Ana	lysis Time: 00:00		
Carbonate Alkali	nity			,	SD Lot-Sample #:	F8E290176-002	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fa	ctor: 1	Ana	lysis Time: 00:00		
pH (liquid)	•				SD Lot-Sample #:	F8E290176-002	
7.6	7.6	No Unit	s 0.0	(0-0.0)	SW846 9040	05/28/08	8149223
		Dilution Fa	ctor: 1	Ana	lysis Time: 00:00		

General Chemistry

Client Lot #...: F8E280143 Work Order #...: KN2LW-SMP

Matrix..... WATER

KN2LW-DUP

Date Sampled...: 05/27/08 09:35 Date Received..: 05/28/08

PARAM RESULT Bicarbonate	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E290176-003	PREP BATCH #
Alkalinity 55.0	52.0	mg/L Dilution Fa	5.6 ctor: 1	(0-15) Ana	MCAWW 310.1	06/02/08	8154062
Carbonate Alkalin	nity ND	mg/L Dilution Fa	0 ctor: 1	(0-20) Ana	SD Lot-Sample #: MCAWW 310.1 Alysis Time: 00:00	F8E290176-003 06/02/08	8154061

General Chemistry

Client Lot #...: F8E280143 Work Order #...: KN2NJ-SMP

Matrix....: WATER

KN2NJ-DUP

Date Sampled...: 05/28/08 08:10 Date Received..: 05/29/08

PARAM RESULT Bicarbonate	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE	PREP BATCH #
Alkalinity					bb boc-bampie #.	F6E290165-001	
51.0	50.0	mg/L	2.0	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fa	ctor: 1	Ana	lysis Time: 00:00		
Carbonate Alkalin	ity				SD Lot-Sample #:	F8E290185-001	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fa	ctor: 1	Ana	lysis Time: 00:00		

General Chemistry

Client Lot #...: F8E280143 Work Order #...: KN46M-SMP

Matrix....: WATER

KN46M-DUP

Date Sampled...: 05/29/08 09:45 Date Received..: 05/30/08

PARAM RESULT Bicarbonate	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E300179-001	PREP BATCH #
Alkalinity					• "		
76.0	78.0	mq/L	2.6	(0-15)	MCAWW 310.1	06/02/08	8154062
	Dilution Factor: 1			Ana	Analysis Time: 00:00		
Carbonate Alkali	nity				SD Lot-Sample #:	F8E300179-001	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fac	tor: 1	Ana	alysis Time: 00:00		

General Chemistry

Client Lot #...: F8E280143

Work Order #...: KN5J2-SMP

Matrix....: WATER

Date Sampled...: 05/29/08 16:10 Date Received..: 05/30/08

PARAM RESULT Bicarbonate	DUPLICATE RESULT	UNITS	RPD •	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E300223-003	PREP BATCH #
Alkalinity 9.4	9.3	mq/L	1.6	(0-15)	MCAWW 310.1	06/02/08	8154062
9.4	J.5	Dilution Factor: 1		Analysis Time: 00:00		00/02/00	0134002
Carbonate Alkalin				SD Lot-Sample #:	F8E300223-003		
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Factor: 1		Analysis Time: 00:00			
Total Alkalinity					SD Lot-Sample #:	F8E300223-003	
189	279	mg/L	38	(0-20)	SM18 2320 B	06/02/08	8154059
		Dilution :	Factor: 1	Ana	llysis Time: 00:00		

General Chemistry

Client Lot #...: F8E280143 Work Order #...: KN6XH-SMP Matrix.....: WATER

KN6XH-DUP

Date Sampled...: 05/30/08 09:45 Date Received..: 05/31/08

Date Damphear !!!	00,00,00				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
•	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS _	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Bicarbonate					SD Lot-Sample #:	F8E310160-003	
Alkalinity							
121	120	mg/L	0.83	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		
Carbonate Alkalin	nity				SD Lot-Sample #:	F8E310160-003	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fa	ctor: 1	Analysis Time: 00:00			

General Chemistry

Client Lot #...: F8E280143

Work Order #...: KN5GT-SMP

Matrix....: WATER

Date Sampled...: 05/28/08 10:02 Date Received..: 05/30/08

KN5GT-DUP

RPD DUPLICATE PREPARATION-PREP. RESULT LIMIT METHOD PARAM RESULT UNITS ANALYSIS DATE BATCH # Total Dissolved SD Lot-Sample #: F8E300212-001 Solids

420 431

2.6 mg/L

(0-15) MCAWW 160.1

06/04-06/05/08 8156338

Dilution Factor: 1 Analysis Time..: 00:00

General Chemistry

Client Lot #...: F8E280143

Work Order #...: KN5RL-SMP

Dilution Factor: 1

Matrix....: WATER

KN5RL-DUP

Analysis Time..: 00:00

Date Sampled...: 05/28/08 10:17 Date Received..: 05/30/08

DUPLICATE RPD PREPARATION-PREP LIMIT RESULT UNITS RPD METHOD ANALYSIS DATE BATCH # PARAM RESULT SD Lot-Sample #: F8E300262-001 Total Dissolved Solids (0-15) MCAWW 160.1 1870 mg/L 9.9 06/04-06/05/08 8156338 1690

General Chemistry

Client Lot #...: F8E280143

Work Order #...: KNX8D-SMP

KNX8D-DUP

Matrix....: WATER

Date Sampled...: 05/27/08 11:35 Date Received..: 05/28/08

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Bromide					SD Lot-Sample #:	F8E280143-001	
262	205 B	mg/L	24	(0-20)	MCAWW 300.0A	05/29/08	8165345
		Dilution Fac	tor: 100	0 Ana	alysis Time: 11:27		
				•			
Chloride					SD Lot-Sample #:	F8E280143-001	
37500	35100	mg/L	6.7	(0-20)	MCAWW 300.0A ·	05/29/08	8165346
		Dilution Fac	tor: 100	00 Ama	lysis Time: 11:39		
Fluoride					SD Lot-Sample #:		
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	05/29/08	8165347
•		Dilution Fac	tor: 200	Ana	lysis Time: 11:14		
Sulfate					SD Lot-Sample #:		
4090	4120	mg/L		(0-20)		05/29/08	8165348
		Dilution Fac	tor: 100	0 Ana	alysis Time: 11:27		
Nitrite					SD Lot-Sample #:		
ND	, ND	mg/L	0	(0-20)	MCAWW 300.0A	05/29/08	8165349
		Dilution Fac	tor: 100	00 Ana	lysis Time: 11:39		
1.	•						
Nitrate					SD Lot-Sample #:		
ND	ND	mg/L	0		MCAWW 300.0A	05/29/08	8165350
		Dilution Fac	tor: 200	Ana	llysis Time: 11:14		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

F8E280143

CLIENT ANALYSIS SUMMARY

SDG:

Storage Loc:

1-72

Project Manager: IV

Quote #: 79192

Date Received:

2008-05-28 2008-06-16

Project:

6468071950

FPL Turkey Point COL

Analytical Due Date:

PO#:

200807151

Report to: Al Tice

Report Type: W

Report Due Date:

2008-06-18

Client:

63036

MACTEC Engineering & Consulting inc

#SMPS in LOT: 2

EDD Code: 00

inform PM of any receiving issues.

SAMPLE#	CLIENT SAM		Site ID	Client Matrix	DATE/TI	ME SAMPLED	WORKORD	ER 1	
1	0W-735U	1			2008-05-2	7 / 1135	KNX8D	WATE	ΞR
SAMPLE CO	OMMENTS:								
FE MH	SW846 ,6020	WATER, 6020, // Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET		WRK 06	
KX MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	
MG MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	
✓MN MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	
NA MH	SW846 6020	WATER, 5020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	
ASA MH	SWB46 6020	WATER, Silica by calculation	0X	CALCULATION	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK 06	
∕SI MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2%	01 '	STANDARD TEST SET	PROT: A	WRK 06	
∠CA MH	SW845 6020	WATER, 8020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	
XX AK	MCAW 180.1	WATER, 160.1, Solids	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	•
XX C8	MCAW 300.0A	WATER, 300.0A,	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	
XX C9	MCAW 300.0A	WATER, 300.0A, Nitrate N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	
XX CB	MCAW 310.1	WATER, 310.1, Alkalinity Carbonate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06 LOC	•
XX CX	MCAW 300.0A	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	Mak 06	
XX CY	MCAW 300,0A	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	•
XX FJ	SW846 9040	WATER, 9040C,	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	
XX GM	MCAW 300.0A	WATER, 300.0A	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	
XX GO	MCAW 300.0A	WATER, 300.0A, Nitrite N	as / 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	
XX LV	SM18 2320	WATER, 2320 B, Alkalin Total	uity 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	•
XX UX	MCAW 310.1	WATER, 310.1, AlkalinJi Bicarbonale	y. — 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET .		WRK 06	
XX VM	MCAW 350.1	WATER, 350.1, Nitroger Ammonia	₩ 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	
SAMPLE#	CLIENT SAF	MPLE ID	Site ID	Client Matrix	DATE/TI	ME SAMPLED	WORKORE	ER I	
2	0W-809U				2008-05-2	27 / 1455	KNX8K	WATI	≅R
SAMPLE C	OMMENTS:								
FE MH	SW846 6020	WATER, 6020, Metals	ಡು	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	
∕kx mh	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	•
ymg mh	SW846 8020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	
✓MN MH	SW846 6020	WATER, 6020, Meials	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	
NA MH	SW846 6020	WATER, 5020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK 06	.á
ZSA MH	SW846 6020	WATER, Silica by	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK 06	
y SI MH	SW846 6020	WATER, 6020, Metals	GJ		01	STANDARD TEST SET	PROT: A	WRK 06	
CA MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET		WRK 06	
XX AK	MCAW 160,1 W	WATER, 160.1, Solids, Filterable "TDS"	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT; A	WRK 06	
XX C8	MCAW 300,0A W	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	
. XX C9	MCAW 300,0A W	WATER, 300.0A, Nitrate	88 🥕 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK 06	i
TestAmerica -	St Louis	Logged in by: WILSO	NS 2008	-05-28 9:51:54	pı	inted on: Wednesday, Ma	y 28, 2008 11:16		Page 1 of 2

F8E280143

CLIENT ANALYSIS SUMMARY

SDG:

Storage Loc:

1-72

Project Manager: IV

Quote #: 79192

Date Received:

2008-05-28

Project:

6468071950

FPL Turkey Point COL

Analytical Due Date:

2008-06-16 2008-06-18

29.

PO#:

200807151

Report to: Al Tice

Report Due Date:

Client

63036

MACTEC Engineering & Consulting Inc.

Report Type: W

Client:		6303	ь	MACTEC Engineering & C	onsun	ing inc	#SMPS in LO	DT: 2 E	DD Code:	00		
nform PN	of an	y receiving is	58085.									
								·				
хх	CB	MCAW 310	0.1	WATER, 316.1, Alkalinity,	8 B	NO SAMPLE PREPARATIO PERFORMED / DIRECT	N 01	STANDARD TEST SI	<u> </u>	PROT: A	WRK	06
ΧX	СХ	MCAW 300	A0,0	WATER, 300.0A, / Chloride	88	NO SAMPLE PREPARATIO PERFORMED / DIRECT	N 01	STANDARD TEST SI	ET	PROT: A	WRK	06
XX	CY	MCAW 300	A0.0	WATER, 300.0A, // Sulfate	88	NO SAMPLE PREPARATIO PERFORMED / DIRECT	N 01	STANDARD TEST S	डा	PROT: A	WRK	06
XX	FJ	SW846 904	40	WATER, 9040C/	88	NO SAMPLE PREPARATIO PERFORMED / DIRECT	N 01	STANDARD TEST SE	ET	PROT: A	WRK	06
XX	GM	MCAW 3D	A0.0	WATER, 30D.0A, / Bromide	88	NO SAMPLE PREPARATIO PERFORMED / DIRECT	N 01	STANDARD TEST SI	ΞT	PROT: A	WRK	06
XX	GO	MCAW 300	A0.0	WATER, 300.0A, Nitrite as N	88	NO SAMPLE PREPARATIO PERFORMED / DIRECT	N 01	STANDARD TEST S	ΞŤ	PROT: A	WRK LOC	06
XX	LV	SM18 23	20	WATER, 2320 B, Alkalinity/ Total	88	NO SAMPLE PREPARATIO PERFORMED / DIRECT	ท 01	STANDARD TEST S		PROT: A	WRK Loc	06
XX	UX	MCAW 310 W	D.1	WATER, 310.1, Alkalinity./ Bicarbonate	88	NO SAMPLE PREPARATIO PERFORMED / DIRECT		STANDARD TEST SI		PROT; A	WRK	06
XX	VM	MCAW 350	0.1	WATER, 350.1, Nitrogen,	88	NO SAMPLE PREPARATIO PERFORMED / DIRECT	to N	STANDARD TEST SI	€T	PROT: A	WRK LOC	06

CVIL 3535

Chain of Custody Record

Temperature on	Receipt	
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TestAmerica

Drinking Water? Yes No THE LEADER IN ENVIRONMENTAL TESTING

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Client MACTEC		Project	Sco	14	A	يمرير	ef	, 									oete OS	5-:	27	L	8		Chair	of Custo	24	nber 64		
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Comments CATIONS EPA COZOC CATIONS and nitrout Mitrout DISTRIBUTION: WHITE - Returned to Client with Report;	ne Analys	Mitro Sio M	te est	50,001S	€ }	ay	5.0 · C	ho	nç	۷.	pe	nal	سا	À	 BP1	~~~	al	حد _	F	5		- >C		hear	 2. U	Juit	 .	
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TestAme	Constitution of the second of	Lot #(s):/	F8E280143
THE LEADER IN ENVIRONME	INTAL TESTING	 -	
Client: <u>Ma.ACL</u> Duote No:	COC/RFA No:	Condition Upon Recei	ipt Form 944 Date: 5/28/08 Time: 2594)
ZLOIC 146.	· · · · · · · · · · · · · · · · · · ·	- '- T. C	
	Ship 20 8233 6. 7. 8. 9. 10. correspond to Numbered Sample Temp lines for yes, "N" for no and "N/A" for not applicable):	**Sample must be rece variance does NOT affe	Multiple Packages Y N Sample Temperature (s):** 1. Z 6. 2. 7. 3. 8. 4. 9. 5. 10. ived at 4°C±2°C. If not, note contents below. Temperature ext the following: Metals-Liquid or Rad tests- Liquid or Solids
. (Y) N	Are there custody seals present on	8. Y/N	Are there custody seals present on bottles?
Y N N/A	the cooler? Do custody seals on cooler appear to be tampered with?	9. Y N N/A	Do custody seals on bottles appear to be tampered with?
. PN	Were contents of cooler frisked after opening, but before unpacking?	10. Y N N/A	Was sample received with proper pH¹? (If not, make note below)
Y N	Sample received with Chain of Custody?	11. Y N	If N/A- Was pH taken by original TestAmerica lab?
Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. Y N	Sample received in proper containers?
Y N	Was sample received broken?	13. Y N (N/A)	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)
. (Y)N	Is sample volume sufficient for analysis?	14. Y N	Was Internal COC/Workshare received?
Totes:	ANL, Sandia) sites, pH of ALL containers receive	a must be vermen, Excel	T VOA, TOA and SOIIS.
			
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Corrective Action: Client Contact 1		Informed by:	
☐ Sample(s) proce ☐ Sample(s) on he Project Managemen	old until:	_ If released, notify: Date:	5-29-8
THIS FORM MUST BE	COMPLETED AT THE TIME THE ITEMS ARE THAT PERSON IS REQUIRED TO APPLY TO	BEING CHECKED IN. II TEIR INITIAL AND THE I	F ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN DATE NEXT TO THAT ITEM. 6/07\SIsv:01\QA\FORMS\ST-LOUIS\ADMIN\Admin004 rev1

LOT# F8e280143 - Rev 1

33 of 33



DOCUMENTATION OF TECHNICAL REVIEW SUBCONTRACTOR WORK PRODUCT

Project Name: Turkey Point COL Project Project Number: 6468-07-1950 Project Manager: Scott Auger Project Principal: Tom McDaniel The report described below has been prepared by the named subcontractor retained in accordance with the MACTEC QAPD. The work and report have been reviewed by a MACTEC technically qualified person. Comments on the work or report, if any, have been satisfactorily addressed by the subcontractor. The attached report is approved in accordance with section QS-7 of MACTEC's QAPD. The information and data contained in the attached report are hereby released by MACTEC for project use. REPORT: Analytical Report Lot #: F8F060153 SUBCONTRACTOR: TestAmerica, Earth City, MO DATE OF ACCEPTANCE: 7/23/2008 TECHNICAL REVIEWER: William S. Grimes PROJECT PRINCIPAL: Tom McDaniel





Client Bechtel Power Corp. Laboratory TestAmerica Inc.

MACTEC Project <u>6468-07-1950</u> Data Report Number/Date <u>Lot# F8F060153/7-1-08</u>

	LABORATORY DATA REVIEW CHECKLIST	YES	<u>NO</u>	<u>NOT</u> <u>APPLICABLE</u>
1.	Laboratory analytical data report appears complete (all data results present for all samples submitted for analysis) and there are no apparent transcription errors:		<u>√'</u>	
2.	Samples analyzed within applicable holding times (based on date of sample collection):*	<u>✓</u>		
3.	Trip blanks, field blanks or laboratory method blanks are free of blank contamination:		<u>✓²</u>	
4.	If field duplicate samples collected, calculated results meet Relative Percent Difference guidelines: **			<u> ✓</u>
5.	Surrogate recoveries (organic analyses only) within laboratory reported recovery acceptance ranges:			<u> </u>
6.	If Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples required to meet project objectives, Percent Recoveries (%R) and Relative Percent Difference (RPD) within laboratory reported acceptance ranges:		<u>√</u> ³	
7.	Reported detection limits meet project objectives (e.g., are capable of achieving applicable site standards):	<u> ✓</u>		
8.	Completed Chain-Of-Custody received noting sample/custody seal condition (with airbill, if appropriate):	· <u> ✓</u>		
9.	Analytical costs within authorized budget for these services:			<u>✓</u>
	COMMENTS: ¹ Ion balance difference results erroneously flagged with a "B" data qualifier. Results should not be flat chloride was detected in the method blank, at a concentration between the PQL and MDL. Chloride concentrations in a ambient aquifer conditions. ³ MS/MSD recoveries were outside QC limits for several analytes possibly due to matrix recoveries and results for analytes with acceptable recoveries.	site samples	were consid	erably higher, and likely reflec
Notes:	1. This checklist is intended for use with the laboratory reporting formats typical of most projects. If "no" is answere through 7, a more detailed Data Validation may be required, and a person knowledgeable in Data Validation protocols used if the project scope requires Data Validation from the onset.			
	2. * = Based upon EPA Guidance and the applicable analytical method references. See reverse side of checklist for or	details.		
	3. ** = Based upon EPA Guidance. Use these criteria on duplicate and sample results which exceed five times the redetails. Checked by:	ported detec	tion limit. S	See reverse side of checklist for



ANALYTICAL REPORT

PROJECT NO. 6468071950

FPL Turkey Point COL

Lot #: F8F060153

Al Tice

MACTEC Engineering and Cons. 3301 Atlantic Ave. Raleigh, NC 27604

TESTAMERICA LABORATORIES, INC.

Ivan Vania Project Manager

July 1, 2008

Case Narrative LOT NUMBER: F8F060153

This report contains the analytical results for the two samples received under chain of custody by TestAmerica St. Louis on June 6, 2008. These samples are associated with your FPL Turkey Point COL project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP-MS (SW846-6020)

The MS (MSD) recoveries for batch 8164260 - calcium, potassium, magnesium, sodium, silicon are outside the established QC limits. The analyte concentrations in the original samples are greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8F060153 (1): OW-802U F8F060153 (2): OW-805U

The MS (MSD) recoveries for batch 8164260 – iron are outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8F060153 (1): OW-802U F8F060153 (2): OW-805U

The MS (MSD) recoveries for batch 8164260 - manganese are outside the established QC limits due to matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8F060153 (1): OW-802U F8F060153 (2): OW-805U

DCN# TUR512

Batch 8164260:

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limits were adjusted for the dilution since no analysis at a lesser dilution was performed.

Affected Samples:

F8F060153 (1): OW-802U F8F060153 (2): OW-805U

Chloride (MCAWW 300.0A)

Poor matrix spike recovery for Nitrite in batch 8158478 is attributed to matrix interference. The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries.

Affected Samples:

F8F060153 (1): OW-802U F8F060153 (2): OW-805U

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F8F060153

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
pH Aqueous	SW846 9040	SW846 9040
Alkalinity, Total	SM18 2320 B	SM18 2320 B
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Ion Balance (%Difference)	SM18 1030F & AP	SM18 1030F & AP
ICP-MS (6020)	SW846 6020	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". Third Edition, November 1986 and its updates.

DCN# TUR512

SAMPLE SUMMARY

F8F060153

WO # S	AMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
KPHA3 KPHCH	001 002	OW-802U OW-805U	06/05/08 06/05/08	
			. ,	

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Client Sample ID: OW-802U

TOTAL Metals

Lot-Sample # Date Sampled		001 2:35 Date Received.	: 06/06/08	Matrix:	WATER
		REPORTING		PREPARATION-	WORK
PARAMETER	RESULT	LIMIT UNITS	METHOD	ANALYSIS DATE	ORDER #
Prep Batch #	.: 8164260				
Calcium	579000 N	100 000 ug/L	SW846 6020	06/12-06/25/08	KPHA31AN
		Dilution Factor: 1000	Analysis Time: 17:02		
Iron	ND N	50000 ug/L	SW846 6020	06/12-06/25/08	KPHA31AP
		Dilution Factor: 1000	Analysis Time: 17:02		
Potassium	586000 N	100000 ug/L	SW846 6020	06/12-06/25/08	крназіао
		Dilution Factor: 1000	Analysis Time: 17:02		
Magnesium	1980000 N	50000 ug/L	SW846 6020	06/12-06/25/08	KPHA31AR
		Dilution Factor: 1000	Analysis Time: 17:02		
Manganese	ND N	2000 ug/L	SW846 6020	06/12-06/25/08	KPHA31AT
		Dilution Factor: 1000	Analysis Time: 17:02		
Sodium	16400000 N	50000 ug/L	SW846 6020	06/12-06/25/08	KPHA31AU
		Dilution Factor: 1000	Analysis Time: 17:02		
Silicon	66700 BN	250000 ug/L	SW846 6020	06/12-06/25/08	KPHA31AV
		Dilution Factor: 1000	Analysis Time: 17:02		
Prep Batch #					
Silica	143000 Ј	250000 ug/L	SW846 6020	06/12-06/25/08	KPHA31AW
		Dilution Factor: 1000	Analysis Time: 17:02		

N Spiked analyte recovery is outside stated control limits.

NOTE(S):

J Estimated result. Result is less than RL.

Client Sample ID: OW-802U

General Chemistry

Lot-Sample #...: F8F060153-001 Work Order #...: KPHA3 Matrix.....: WATER

Date Sampled...: 06/05/08 12:35 Date Received..: 06/06/08

						PREPARATION-	PREP
PARAMETER	RESULT	RL	UNITS	METHO	D	ANALYSIS DATE	BATCH #
pH (liquid)	7.3	0.10	No Units	SW846	9040	06/06/08	8161156
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Bicarbonate Alkalinity	178	5.0	mg/L	MCAWW	310.1	06/10/08	8161269
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Bromide	65.1	50.0	mg/L	MCAWW	300.0A	06/06/08	8158474
		Dilution Fact	or: 200	Analysis	Time: 08:16		
Carbonate Alkalinity	ND	5.0	mg/L		310.1	06/10/08	8161267
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Chloride	31600	2000	mg/L	MCAWW	300.0A	06/06/08	8158475
		Dilution Fact	or: 10000	Analysis	Time: 08:40		
Fluoride	ND	20.0	mg/L	MCAWW	300.0A	06/06/08	8158476
		Dilution Fact	or: 200	Analysis	Time: 08:16		
Ion Balance Difference	3.0 B	0.10	\$	SM18	1030F & API	07/01/08	8183319
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Nitrate	ND	0.20	mg/L	MCAWW	300.0A	06/06/08	8158479
		Dilution Fact	or: 10	Analysis	Time: 08:04		
Nitrite	ND .	200	mg/L	MCAWW	300.0A	06/06/08	8158478
		Dilution Fact	or: 10000	Analysis	Time: 08:40		
Nitrogen, as Ammonia	1400	200	ug/L	MCAWW	350.1	06/11/08	8163468
1		Dilution Fact	or: 4	Analysis	Time: 00:00		
Sulfate	3720	500	mg/L	MCAWW	300.0A	06/06/08	8158477
		Dilution Fact	or: 1000	Analysis	Time: 08:28		
Total Alkalinity	178	5.0	mg/L	SM18	2320 B	06/10/08	8161265
		Dilution Fact	or: 1	Analysis	s Time: 00:00		
Total Dissolved Solids	53900	500	mg/L	MCAWW	160.1	06/11-06/12/08	8163486
		Dilution Fact	or: 100	Analysis	Time: 00:00		

NOTE(S):

DCN# TUR512

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

Client Sample ID: OW-805U

TOTAL Metals

Lot-Sample #: F8F060153-002		Matrix: WATER
Date Sampled: 06/05/08 15:00	Date Received: 06/06/08	

		REPORTING	3			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO	<u> </u>	ANALYSIS DATE	ORDER #
Prep Batch #			-				
Calcium	447000 N	100000	ug/L	SW846		06/12-06/25/08	KPHCHLAN
		Dilution Fact	or: 1000	Analysis	Time: 17:26		
Iron	ND N	50000	ug/L	SW846	6020	06/12-06/25/08	KPHCH1AP
		Dilution Fact	or: 1000	Analysis	Time: 17:26		
Potassium	493000 N	100000	uq/L	SW846	6020	06/12-06/25/08	EDUCET NO
FOCASSIUM	432000 W	Dilution Fact	•		Time: 17:26	06/12-06/25/06	KERCELAQ
		Dilucton Fact	.O.C.: 1000	Analysis	11me: 17:26		
Magnesium	1570000 N	50000	ug/L	SW846	6020	06/12-06/25/08	KPHCH1AR
		Dilution Fact	or: 1000	Analysis	Time: 17:26		
Manganese	ND N	2000	ug/L	SW846	6020	06/12-06/25/08	крисил ат
		Dilution Fact	•		Time: 17:26	00/22 00/25/00	1411011111
Sodium	13200000 N	50000	ug/L	SW846	6020	06/12-06/25/08	KPHCH1AU
		Dilution Fact	or: 1000	Analysis	Time: 17:26		
Silicon	49900 BN	250000	uq/L	SW846	6020	06/12-06/25/08	KPHCH1AV
2-1-1		Dilution Fact	٠.		Time: 17:26	00/22 00/20/00	
				<u>-</u>			
Prep Batch #							
Silica	107000 J	250000	ug/L		6020	06/12-06/25/08	KPHCH1AW
		Dilution Fact	or: 1000	Analysis	Time: 17:26		

N Spiked analyte recovery is outside stated control limits.

J Estimated result. Result is less than RL.

Client Sample ID: OW-805U

General Chemistry

Lot-Sample #...: F8F060153-002 Work Order #...: KPHCH Matrix....: WATER

Date Sampled...: 06/05/08 15:00 Date Received..: 06/06/08

PARAMETER	RESULT	RL	UNITS	METHOI	0	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (liquid)	7.4	0.10 Dilution Facto	No Units	SW846 Analysis	9040 Time: 00:00	06/06/08	8161156
Bicarbonate Alkalinity	177	5.0	mg/L	MCAWW	310.1	06/10/08	8161269
	:	Dilution Facto	or: 1	Analysis	Time: 00:00		
Bromide	53.6	50 .0	mq/L	MCAWW	300.0A	06/06/08	8158474
	:	Dilution Facto	•	Analysis	Time: 11:03		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW	310.1	06/10/08	8161267
_		Dilution Facto	or: 1	Analysis	Time: 00:00		
Chloride	27600 J	2000	mg/L		300.0A	06/06/08	8158475
		Dilution Facto	or: 10000	Analysis	Time: 11:27		
Fluoride	ND	20.0	mq/L	MCAWW	300.0A	06/06/08	8158476
		Dilution Facto	•	Analysis	Time: 11:03		
Ion Balance Difference	6.9 B	0.10	뤗	SM18	1030F & API	07/01/08	8183319
		Dilution Facto	or: 1	Analysis	Time: 00:00		
Nitrate	ND	0.20	mg/L		300.0A	06/06/08	8158479
		Dilution Facto	or: To	Analysis	Time: 10:51		
Nitrite	ND	200	mg/L	MCAWW	300.0A	06/06/08	8158478
		Dilution Facto	or: 10000	Analysis	Time: 11:27		
Nitrogen, as Ammonia	548	50.0	ug/L	MCAWW	350.1	06/11/08	8163468
•		Dilution Facto	_	Analysis	Time: 00:00		
Sulfate	3070	500	mg/L	MCAWW	A0.00E	06/06/08	8158477
		Dilution Fact	- -	Analysis	Time: 11:15	• • •	
Total Alkalinity	177	5.0	mg/L	SM18	2320 B	06/10/08	8161265
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Total Dissolved Solids	45700	500	mg/L	MCAWW	160.1	06/11-06/12/08	8163486
		Dilution Fact	or: 100	Analysis	Time: 00:00		

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #: F8F060153 Matrix WATE

		REPORTING	;			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO	D	ANALYSIS DATE	ORDER #
	. ========	060 P P-		254050			
MB Lot-Sample :	f: F8F120000- ND B	100 Prep Ba	.t ch #: 8 ug/L	SW846	6020	06/12-06/25/08	א המסומים א
Calcium	ND B	Dilution Facto	•	DWO40	8020	06/12-06/25/08	RPRWEIAA
		Analysis Time			-		
		-					
Iron	ND	50	ug/L	SW846	6020	06/12-06/25/08	KPRWFlAC
		Dilution Facto	or: 1				
		Analysis Time	: 16:54				
Magnesium	ND	50	ug/L	SW846	6020	06/12-06/25/08	KPRWF1AR
ragnesian	112	Dilution Facto		B.1020	0020	00, 22 00, 23, 00	111111111111111111111111111111111111111
		Analysis Time					
Manganese	ND	2	ug/L	SW846	6020	06/12-06/25/08	KPRWF1AF
		Dilution Facto					
		Analysis Time	: 16:54				
Potassium	ND	100	ug/L	SW846	6020	06/12-06/25/08	KPRWF1AD
		Dilution Facto	or: 1				
		Analysis Time	: 16:54				•
Silicon	ND	250	11 6 /T	SW846	6020	06/12-06/25/08	ער בשמשות איני
Silicon	MD	250 Dilution Fact	ug/L	5W646	6020	06/12-06/25/08	RPRWEIAH
	Analysis Time					•	
Sodium	ND	50	ug/L	SW846	6020	06/12-06/25/08	KPRWF1AG
•		Dilution Fact	or: 1				
		Analysis Time	: 16:54				
MB Lot-Sample :	#: F8F230000	-114 Prep Ba	ntch #: 8	8175114			
Silica	ND	250	ug/L	SW846		06/12-06/25/08	KQL7E1AA
		Dilution Fact					
		Analysis Time	: 17:26				

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #:	F8F060153		cix WATER		
PARAMETER	RESULT	REPORTING LIMIT UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity		Work Order #: KPLC11A			. 5111 011 1
•	ND	5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	MCAWW 310.1	06/10/08	8161269
Bromiđe	ND	Work Order #: KPMF61A 0.25 mg/L Dilution Factor: 1 Analysis Time: 06:34	A MB Lot-Sample #: MCAWW 300.0A	F8F060000-474 06/06/08	8158474
Carbonate Alkalin	ity ND	Work Order #: KPLCR1A 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:00	A MB Lot-Sample #: MCAWW 310.1	F8F090000-267 06/10/08	8161267
Chloride	0.041 B	Work Order #: KPMF81A 0.20 mg/L Dilution Factor: 1 Analysis Time: 06:34	A MB Lot-Sample #: MCAWW 300.0A	F8F060000-475 06/06/08	8158475
Fluoride	ND .	Work Order #: KPMGD1A 0.10 mg/L Dilution Factor: 1 Analysis Time: 06:34	A MB Lot-Sample #: MCAWW 300.0A	F8F060000-476 06/06/08	8158476
Nitrate	ND	Work Order #: KPMGH1A 0.020 mg/L Dilution Factor: 1 Analysis Time: 06:34	A MB Lot-Sample #: MCAWW 300.0A	F8F060000-479 06/06/08	8158479
Nitrite	ND	Work Order #: KPMGGLA 0.020 mg/L Dilution Factor: 1 Analysis Time: 06:34	A MB Lot-Sample #: MCAWW 300.0A	F8F060000-478 06/06/08	8158478
Nitrogen, as Ammo	nia ND	Work Order #: KPQWM1F 50.0 ug/L Dilution Factor: 1 Analysis Time: 00:00	A MB Lot-Sample #: MCAWW 350.1	F8F110000-468 06/11/08	8163468
Sulfate	ND	Work Order #: KPMGF1F 0.50 mg/L Dilution Factor: 1 Analysis Time: 06:34	AA MB Lot-Sample #: MCAWW 300.0A	F8F060000-477 06/06/08	8158477

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8F060153

Matrix..... WATER

		REPORTIN	G		PREPARATION-	PREP
PARAMETER	RESULT	LIMIT	UNITS	METHOD	ANALYSIS DATE	BATCH #
Total Alkalinity	ND	Work Order 5.0 Dilution Fact Analysis Time		MB Lot-Sample #: SM18 2320 B	F8F090000-265 06/10/08	8161265
Total Dissolved Solids		Work Order	#: KPQXJlAA	MB Lot-Sample #:	F8F110000-486	
501145	ND	5.0 Dilution Fact Analysis Time		MCAWW 160.1	06/11-06/12/08	8163486
MONTE (C)						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	F8F060153			Matrix	: WATER
PARAMETER		RECOVERY LIMITS METHO	D	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: Calcium		260 Prep Batch #. (85 - 115) SW846 Dilution Factor: 1	6020	· · · · · · · · · · · · · · · · · · ·	KPRWF1AJ
Iron	105	(85 - 115) SW846 Dilution Factor: 1			KPRWFlak
Potassium	106	(85 - 115) SW846 Dilution Factor: 1			KPRWFlAL
Magnesium	105	(85 - 115) SW846 Dilution Factor: 1	,		KPRWF1AM
Manganese	111	(85 - 115) SW846 Dilution Factor: 1			KPRWFlan
Sodium	103	(85 - 115) SW846 Dilution Factor: 1			KPRWF1AP
Sílicon	111	(85 - 115) SW846 Dilution Factor: 1		• • • • • •	KPRWF1AQ
LCS Lot-Sample#: Silica		114 Prep Batch #. (0.0- 0.0) SW846 Dilution Factor: 1	6020	06/12-06/25/08	KQL7E1AC

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: F8F060153

Matrix..... WATER

	PERCENT	RECOVERY	RPD		PREPARATION- PRI	3P
PARAMETER .	RECOVERY	LIMITS RPD	LIMITS	METHOD	ANALYSIS DATE BAT	rch #
Nitrogen, as	Ammonia	WO#: KPQWMlAC	-LCS/KPQ	WM1AD-LCSD LC	S Lot-Sample#: F8F11000	00-468
	103	(90 - 110)		MCAWW 350.1	06/11/08 816	53468
	96	(90 - 110) 6.1	(0-20)	MCAWW 350.1	06/11/08 816	53468
		Dilution Fac	tor. 1	Analysis Time		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #	.: F8F06015	3 Matrix WATER
PARAMETER ph (liquid)	PERCENT RECOVERY	RECOVERY PREPARATION - PREP LIMITS METHOD ANALYSIS DATE BATCH # Work Order #: KPK3KlAA LCS Lot-Sample#: F8F090000-156 (99 - 101) SW846 9040 06/06/08 8161156 Dilution Factor: 1 Analysis Time: 00:00
Bicarbonate Alkalinity		Work Order #: KPLC11AC LCS Lot-Sample#: F8F090000-269 (90 - 110) MCAWW 310.1 06/10/08 8161269 Dilution Factor: 1 Analysis Time: 00:00
Bromide	101	Work Order #: KPMF61AC LCS Lot-Sample#: F8F060000-474 (90 - 110) MCAWW 300.0A 06/06/08 8158474 Dilution Factor: 1 Analysis Time: 06:22
Carbonate Alka	linity 101	Work Order #: KPLCR1AC LCS Lot-Sample#: F8F090000-267 (90 - 110) MCAWW 310.1 06/10/08 8161267 Dilution Factor: 1 Analysis Time: 00:00
Chloride	99	Work Order #: KPMF81AC LCS Lot-Sample#: F8F060000-475 (90 - 110) MCAWW 300.0A 06/06/08 8158475 Dilution Factor: 1 Analysis Time: 06:22
Fluoride	96	Work Order #: KPMGD1AC LCS Lot-Sample#: F8F060000-476 (90 - 110) MCAWW 300.0A 06/06/08 8158476 Dilution Factor: 1 Analysis Time: 06:22
Nitrate	102	Work Order #: KPMGH1AC LCS Lot-Sample#: F8F060000-479 (90 - 110) MCAWW 300.0A 06/06/08 8158479 Dilution Factor: 1 Analysis Time: 06:22
Nitrite	100	Work Order #: KPMGG1AC LCS Lot-Sample#: F8F060000-478 (90 - 110) MCAWW 300.0A 06/06/08 8158478 Dilution Factor: 1 Analysis Time: 06:22
Sulfate	96	Work Order #: KPMGF1AC LCS Lot-Sample#: F8F060000-477 (90 - 110) MCAWW 300.0A 06/06/08 8158477 Dilution Factor: 1 Analysis Time: 06:22
Total Alkalini	ty 101	Work Order #: KPLCP1AC LCS Lot-Sample#: F8F090000-265 (90 - 110) SM18 2320 B 06/10/08 8161265 Dilution Factor: 1 Analysis Time: 00:00

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F8F060153 Matrix....: WATER Date Sampled...: 06/05/08 12:35 Date Received..: 06/06/08 RECOVERY RPD PERCENT PREPARATION-WORK METHOD PARAMETER RECOVERY LIMITS RPD LIMITS ANALYSIS DATE ORDER # MS Lot-Sample #: F8F060153-001 Prep Batch #...: 8164260 Calcium 0 N (75 - 125)SW846 6020 06/12-06/25/08 KPHA31CF 122 (75 - 125) 0.0 (0-20)SW846 6020 06/12-06/25/08 KPHA31CG Dilution Factor: 1000 Analysis Time..: 17:10 (75 - 125)SW846 6020 06/12-06/25/08 KPHA31CH Iron 0 N 0 N (75 - 125) 0.0 (0-20) SW846 6020 06/12-06/25/08 KPHA31CJ Dilution Factor: 1000 Analysis Time..: 17:10 Magnesium 0 N (75 - 125)SW846 6020 06/12-06/25/08 KPHA31CM 9.5 N (75 - 125) 0.0 (0-20)SW846 6020 06/12-06/25/08 KPHA31CN Dilution Factor: 1000 Analysis Time..: 17:10 06/12-06/25/08 KPHA31CP (75 - 125)SW846 6020 Manganese 146 N 155 N (75 - 125) 6.1 (0-20)SW846 6020 06/12-06/25/08 KPHA31CQ Dilution Factor: 1000 Analysis Time..: 17:10 Potassium 0 N (75 - 125)SW846 6020 06/12-06/25/08 KPHA31CK 66 N (75 - 125) 0.0 (0-20)SW846 6020 06/12-06/25/08 KPHA31CL Dilution Factor: 1000 Analysis Time..: 17:10 (75 - 125)SW846 6020 06/12-06/25/08 KPHA31CU Silicon 0 N 0 N,B (75 - 125) 0.0 (0-20)SW846 6020 06/12-06/25/08 KPHA31CV Dilution Factor: 1000

Analysis Time..: 17:10

Dilution Factor: 1000 Analysis Time..: 17:10

(75 - 125) 0.0 (0-20)

NOTE(S):

Sodium

Calculations are performed before rounding to avoid round-off errors in calculated results.

(75 - 125)

0 N

SW846 6020

SW846 6020

06/12-06/25/08 KPHA31CR

06/12-06/25/08 KPHA31CT

N Spiked analyte recovery is outside stated control limits.

B Estimated result. Result is less than RL.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8F060153 Matrix.....: WATER

Date Sampled...: 06/05/08 12:35 Date Received..: 06/06/08

	PERCENT	RECOVERY PREPARATION- PREP
PARAMETER	RECOVERY	LIMITS METHOD ANALYSIS DATE BATCH #
Bromide		Work Order #: KPHA31A2 MS Lot-Sample #: F8F060153-001
	94	(90 - 110) MCAWW 300.0A 06/06/08 8158474
		Dilution Factor: 200 Analysis Time: 08:16
Chloride		Work Order #: KPHA31A4 MS Lot-Sample #: F8F060153-001
	101	(90 - 110) MCAWW 300.0A 06/06/08 8158475
		Dilution Factor: 10000 Analysis Time: 08:40
Fluoride		Work Order #: KPHA31A6 MS Lot-Sample #: F8F060153-001
	90	(90 - 110) MCAWW 300.0A 06/06/08 8158476
	•	Dilution Factor: 200 Analysis Time: 08:16
Nitrate		Work Order #: KPHA31CD MS Lot-Sample #: F8F060153-001
	100	(90 - 110) MCAWW 300.0A 06/06/08 8158479
		Dilution Factor: 10 Analysis Time: 08:04
Nitrite		Work Order #: KPHA31CA MS Lot-Sample #: F8F060153-001
	143 N	(90 - 110) MCAWW 300.0A 06/06/08 8158478
		Dilution Factor: 10000 Analysis Time: 08:40
Nitrogen, as Am	monia	
	106	(90 - 110) MCAWW 350.1 06/11/08 8163468
		Dilution Factor: 2 Analysis Time: 00:00
		·
Sulfate		Work Order #: KPHA31A8 MS Lot-Sample #: F8F060153-001
	95	(90 - 110) MCAWW 300.0A 06/06/08 8158477
		Dilution Factor: 1000 Analysis Time: 08:28
Total Alkalinit	У	Work Order #: KPF631A0 MS Lot-Sample #: F8F050344-001
	92	(80 - 120) SM18 2320 B 06/10/08 8161265
		Dilution Factor: 1 Analysis Time: 00:00

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Client Lot #...: F8F060153

Work Order #...: KPHA3-SMP

KPHA3-DUP

Matrix....: WATER

Date Sampled...: 06/05/08 12:35 Date Received..: 06/06/08

PARAM Bromi	RESULT de 65.1	DUPLICATE RESULT	UNITS mg/L	RPD	RPD LIMIT	METHOD SD Lot-Sample #: MCAWW 300.0A	PREPARATION- ANALYSIS DATE F8F060153-001 06/06/08	PREP BATCH # 8158474
	65.1	00.0	Dilution Fact			lysis Time: 08:16	06/06/08	0130414
						. –		
Chlor	ide		•			SD Lot-Sample #:		
	31600 J	31700	mg/L			MCAWW 300.0A	06/06/08	8158475
			Dilution Fact	or: 100	00 Ana	lysis Time: 08:40		
Fluor	ide					SD Lot-Sample #:	F8F060153-001	
	ND	ND	mg/L	0	(0-20)	MCAWW 300.0A		8158476
			Dilution Fact	or: 200	Ana	lysis Time: 08:16	•	
Sulfa						SD Lot-Sample #:		
	3720	3690	mg/L			MCAWW 300.0A	06/06/08	8158477
			Dilution Fact	or: 100	0 Ana	lysis Time: 08:28		
Nitri	te	•				SD Lot-Sample #:	F8F060153-001	
	ND	ND	mq/L	0	(0-20)	MCAWW 300.0A		8158478
			٠.	or: 100	00 Ana	lysis Time: 08:40	•	•
Nitra						SD Lot-Sample #:		
	ND	ND	mg/L	0		MCAWW 300.0A	06/06/08	8158479
			Dilution Fact	cor: 10	Ana	llysis Time: 08:04		
L) Ha	iquid)					SD Lot-Sample #:	F8F060153-001	
P** / T	7.3	7.3	No Units	0.41	(0-0.0)	SW846 9040		8161156
			Dilution Fac			alysis Time: 00:00	, , -	
						=		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

General Chemistry

Client Lot #...: F8F060153

Work Order #...: KPF63-SMP

Matrix....: WATER

Date Sampled...: 06/04/08 14:20 Date Received..: 06/05/08

DUPLICATE RPD PREPARATION-UNITS RPD LIMIT METHOD PARAM RESULT RESULT ANALYSIS DATE BATCH # SD Lot-Sample #: F8F050344-001 Total Alkalinity (0-20) SM18 2320 B 181 183 mg/L 1.1 06/10/08 8161265 Dilution Factor: 1 Analysis Time..: 00:00

General Chemistry

Client Lot #...: F8F060153

Work Order #...: KN9V9-SMP

Matrix....: WATER

KN9V9-DUP Date Sampled...: 06/02/08 07:50 Date Received..: 06/03/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8F030220-002	PREP BATCH #	
57.0	56.0	mg/L Dilution Fa	1.8 ctor: 1	(0-15) An:	MCAWW 310.1	06/10/08	8161269	
Carbonate Alkal	inity ND	mg/L	0	(0-20)	SD Lot-Sample #: MCAWW 310.1	F8F030220~002 06/10/08	8161267	
		Dilution Pa	ctor: 1	Ana	alysis Time: 00:00			

General Chemistry

Client Lot #...: F8F060153

Work Order #...: KPHCH-SMP

Matrix: WATER

KPHCH-DUP

Date Sampled...: 06/05/08 15:00 Date Received..: 06/06/08

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Nitrogen, as Ammo	nia				SD Lot-Sample #:	F8F060153-002	
548	578	ug/L	5.4	(0-20)	MCAWW 350.1	06/11/08	8163468
	ם	ilution Fact	or: 1	Ana	lysis Time: 00:00		

F8F060153

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-134,METS

Project Manager: IV

Quote #: 79192 SDG: Date Received:

2008-06-06 2008-06-20

Project:

6468071950

FPL Turkey Point COL

Analytical Due Date: Report Due Date:

2008-06-23:

PO#:

200807151

Report to: Al Tice

Report Type: W

Client:

63036

MACTEC Engineering & Consulting Inc

#SMPS in LOT: 2

EDD Code: 00

inform PM of any receiving issues.

SAMPLE #	CLIENT SAMPL	<u>E ID</u>	Site ID	Client Matrix	DATE/TI	ME SAMPLED	WORKORD	ER	1	
1	OW-802U				2008-06-0	05 / 1235	КРНАЗ	W	ATER	
SAMPLE O	COMMENTS:									
FE MH		WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET		WRK LOC	06	
KX MH	SW845 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
MG MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
MN MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
NA MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
SA MH	SW846 6020	WATER, Silica by calculation	ΟX	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK LOC	06	
SI MH	SW846 6020	WATER, 6020, Metals	မေ	METALS, TOTAL - 2% HCL	. 01	STANDARD TEST SET	PROT: A	WRK	06	
CA MH	SW846 8020	WATER, 6020,	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX AK	MCAW 160.1	Metals WATER, 160.1, Solids,	88	NO SAMPLE PREPARATION	. 01	STANDARD TEST SET	PROT: A	LOC WRK	06	•
. XX C8	MCAW 300.0A	WATER, 300.0A,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	'a :
XX C9	W MCAW 300.0A	Fluorida WATER, 300.0A, Nitrate a	s 88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	•
XX CB	W MCAW 310.1	N WATER, 310.1, Alkalinity,	. 88	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX CX	MCAW 300.0A	Carbonate WATER, 300.0A,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC	06	
XX CY	W MCAW 300.0A	Chloride WATER, 300.0A,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX FJ	W SW846 9040	Sulfate WATER, 9040C,	88.	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX GN	MCAW 300.0A	pH WATER, 300.0A,	. 88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	WRK	06	
XX GO	W MCAW 300.0A W	Bromide WATER, 300.0A, Nitrite as	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06 .	
XX LV	SM1B 2320	N WATER, 2320 B, Alkalinity	, 88	PERFORMED / DIRECT NO SAMPLE PREPARATION REPROPMED / DIRECT	- 01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX SL	B SM18 1030F &	WATER, 1030F & API, Ion	0X	PERFORMED / DIRECT CALCULATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX UX	API MCAW 310.1	Balance WATER, 310.1, Alkalinity,	. 88	NO SAMPLE PREPARATION	. 01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX VM	W MCAW 350.1 W	Bicarbonate WATER, 350.1, Nitrogen, Ammonia	88	PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	LOC WRK LOC	06	
0445154			9 ″ 15		DATE	NE CAMPIEC				
SAMPLE #		<u>EID</u>	Site ID	Client Matrix		ME SAMPLED	WORKORE		1	
2	OW-805U	*		·.	2008-06-0	05 / 1500	KPHCH	W	ATER	
SAMPLE	COMMENTS:									
FE MH	U SW846 5020	WATER, 8020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET		WRK LOC	06	
KX MH		WATER, 8020, Metals	GJ	METALS, TOTAL - 2% - HCL	. 01	STANDARD TEST SET		WRK LOC	06	·
MG MH		WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET		WRK LOC	06	į.
MN MH	SW846 6020	WATER, 6020, Metals	· GJ	METALS, TOTAL - 2% HCL	· 01	STANDARD TEST SET		WRK LOC	90	`:
NA MI	·	WATER, 6020, Metals	GJ	METALS, TOTAL -2% HCL	. 01	STANDARD TEST SET		WRK Loc	06	
SA MH	SW845 6020	WATER, Stice by calculation	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD		WRK Loc	06	
SI MH	SW846 6020	WATER, 6020, Metals	G1	METALS, TOTAL - 2% HCL	. 01	STANDARD TEST SET		WRK	06	
CA MF	SW846 6020	WATER, 6020, Metais	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET .		WRK LOC	06	
XX AK	MCAW 160.1 W	WATER, 160.1, Solids, Filterable "TDS"	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
XX C8	MCAW 300.0A W	WATER, 300.0A Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET		WRK LOC	06	
TestAmerica -	St Louis Log	ged in by: DANIELS	B 2008	-06-07 8:38:04	pı	rinted on: Saturday, June 0	7, 2008 09:45 AM	Λ	F	Page 1 of 2

F8F060153

CLIENT ANALYSIS SUMMARY

Storage Loc:

1-134,METS

Project Manager: IV

Quote #: 79192

SDG:

Date Received: Analytical Due Date: 2008-06-06 2008-06-20

Project:

6468071950

FPL Turkey Point COL

P0#:

200807151

Report Due Date:

2008-06-23

Client:

63036

Report to: Al Tice MACTEC Engineering & Consulting Inc

#SMPS in LOT: 2

Report Type: W

EDD Code: 00

om Pi	V of an	y receiving	issues.									
												•
				•								
							-					
XX	C9	MCAW 3	300.0A	WATER, 300.0A, Nilrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	CB	MCAW 3	310.1	WATER, 310.1, Alkelinity, Carbonate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
χχ	CX	MCAW 3	300.0A	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
ХX	CY	MCAW 3	300.0A	WATER, 300.0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
ХX	FJ	SW846 9	9040	WATER, 9040C, pH	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
ХХ	GM	MCAW 3	300.0A	WATER, 300,0A, Bromide	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
ХХ	GO	MCAW 3	300.QA	WATER, 300,0A, Nitrite as	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	LV	SM18 2	2320 B	WATER, 2320 B, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
ХХ	SL		1030F &	WATER, 1030F & API, Ion Balance	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06	
ХХ	ÜΧ		310.1	WATER, 310.1, Alkelinity, Bicarbonate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	. 01	STANDARD TEST SET	PROT: A	WRK	06	•
XΧ	VM	MCAW 3	350.1	WATER, 350.1, Nitrogen, Ammonia	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	. 01	STANDARD TEST SET	PROT: A	WRK	06	

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Chain of Custody Record 374	el ref	Temperati		·	•	·		· · ·			me	1.0			, · · · ·	
TAL-4124 (1007)		Drinking V	Vater? Y	⁄es 🗌	Nojž	Ļ		THE	LEAD	ER IN EN	VIRONME	NTAL T	ESTING	€		•
Client MACTEC		Project Man	≾డంగా	+ 4	Sug	of					Date O(a	-05	5-08	,	Chain of Custody	Number 467
Address 3301 Atlantic Ave.	ane	Telephone N	919-	87	6-0	14-1	6				Lab Nu				Page	_ of
Kateigh M	27604	Site Contact	Cook	14	ab Con	act		nia	_	20014-04	Analysis (At more space i	tach list is neede	if ed)			
	?oL	Carrier/Way	Number 865	56	26	14	66	A2	1000						Special	Instructions/
Contract/Purchase Order/Quote Nb. 6550 - 07-195	0		Matrix			Contai Preser			100 A							ns of Receipt
Sample I.D. No. and Description (Containers for each sample may be combined on one line	127	Time 🛓	Sed.		H2SO4	E E	ž Š	ZnAc/ NaOH	11.6	が選	GM				Atimo:	Calcium
<u> 0W-802U</u>	1	235	X	11:	13					12	3425	3/4	41		Manga	onesium nest m, silicia
<u>ow-805U</u>	06/05/08 1	500	\times	$+\!\!+\!\!\!+\!\!\!\!+$		4			_ _	끄시		4	- ,- -		1 .	
						+	+	\vdash				W 900	, 0 \$		1 4	SW846 9045(D
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Possible Hazerd identification	☐ Polson B 🔀	Se Unknown	mple Dispo Return To			eposal	l By La	ıb [Archi	ve For	Months	(A fee	e may be a	assess nonth)	ed If samples are	retained
Turn Around Time Required 24 Hours 48 Hours 7. Days 14 D		<u> </u>	, 1	1				(Speci				10,194				
1. Relinquished By		Rate /	Time	200	1. Re	celve	By Chil	A	A		-	·			Date 26-06-0	Time (1837)
2. Relinquished By		Date	Time		2. Re	ceived	By		برجانت						Dale	Time
3. Relinquished By		Date	. Time		3. Re	celved	1 By			•					Date	Time
Comments		٠.			. ·									l	•	
DISTRIBUTION: WHITE - Returned to Client with Report;	CANARY - Stays with	n the Sample; I	INK - Field	Сору										-		

TestAme	THE RESERVE WEEK	3244 - F8F0(07)153	
Lient: Macket	COC/RFA No:	adition Upon Receipt Form O62467 Date: 06.04 Time: 0	130
•	2674 6642 6. 7. 8. 9. 10. correspond to Numbered Sample Temp lines for yes, "N" for no and "N/A" for not applicable):	Multiple Packages Y N) Sample Temperature (s):** 1.	mperature uid or Solids
. У и	Are there custody seals present on the cooler?	. YN Are there custody seals present on bott	les?
. YN N/A	Do custody seals on cooler appear to be tampered with?	Y N(N/A) Do custody seals on bottles appear to b with?	e tampered
N (Y)	Were contents of cooler frisked after opening, but before unpacking?	0. Y N N/A Was sample received with proper pH ¹ ?	(If not,
Y) N	Sample received with Chain of Custody?	1. Y N If N/A- Was pH taken by original Test	tAmerica
Y) N N/A	Does the Chain of Custody match sample ID's on the container(s)?	2. Y N Sample received in proper containers?	
Y(N)	Was sample received broken?	3. Y N NA Headspace in VOA or TOX liquid sam	ples? (If
Y N	Is sample volume sufficient for analysis?	4. Y N Was Internal COC/Workshare received	1?
For DOE-AL (Pantex, L Totes:	ANL, Sandia) sites, pH of ALL containers receive	nust be verified, EXCEPT VOA, TOX and soils.	
· · · · · · · · · · · · · · · · · · ·			
			·
Corrective Action: Client Contact I Sample(s) proc		Informed by:	
☐ Sample(s) proc☐ Sample(s) on hProject Managemen	old until:	If released, notify: Date: 6-2-8	
THIS FORM MUST BE	COMPLETED AT THE TIME THE ITEMS ARI	EING-CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE O'R INITIAL AND THE DATE NEXT TO THAT ITEM.	THER THAN

LOT# F8F060153

Volume 4, Rev 2 - 10/6/2008



DOCUMENTATION OF TECHNICAL REVIEW SUBCONTRACTOR WORK PRODUCT

Project Number: 6468-07-1950

Project Manager: Scott Auger

Project Principal: Tom McDaniel

The report described below has been prepared by the named subcontractor retained in accordance with the MACTEC QAPD. The work and report have been reviewed by a MACTEC technically qualified person. Comments on the work or report, if any, have been satisfactorily addressed by the subcontractor. The attached report is approved in accordance with section QS-7 of MACTEC's QAPD.

The information and data contained in the attached report are hereby released by MACTEC for project use.

REPORT: Analytical Report Lot #: F8E300223

SUBCONTRACTOR: TestAmerica, Earth City, MO



TECHNICAL REVIEWER: William S. Grimes

PROJECT PRINCIPAL: Tom McDaniel



Client Bechtel Power Corp. Laboratory TestAmerica Inc.

MACTEC Project <u>6468-07-1950</u> Data Report Number/Date <u>Lot# F8E300223/ 6-27-08</u>

	LABORATORY DATA REVIEW CHECKLIST	<u>YES</u>	<u>NO</u>	<u>NOT</u> <u>APPLICABLE</u>
1.	Laboratory analytical data report appears complete (all data results present for all samples submitted for analysis) and there are no apparent transcription errors:		<u> ✓¹</u>	
2.	Samples analyzed within applicable holding times (based on date of sample collection):*	<u>✓</u>		
3.	Trip blanks, field blanks or laboratory method blanks are free of blank contamination:		<u>√²</u>	
4.	If field duplicate samples collected, calculated results meet Relative Percent Difference guidelines: **			<u> </u>
5.	Surrogate recoveries (organic analyses only) within laboratory reported recovery acceptance ranges:			<u>✓</u>
6.	If Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples required to meet project objectives, Percent Recoveries (%R) and Relative Percent Difference (RPD) within laboratory reported acceptance ranges:		<u>√</u> ³	
7.	Reported detection limits meet project objectives (e.g., are capable of achieving applicable site standards):	<u>✓</u>		
8.	Completed Chain-Of-Custody received noting sample/custody seal condition (with airbill, if appropriate):	<u>✓</u>		
9.	Analytical costs within authorized budget for these services:			<u>✓</u>
Notes:	COMMENTS: ¹ Iron results should be flagged indicating method blank contamination. ² An estimated concentration of in between the PQL and MDL. Iron concentrations in site samples were considerably higher, and likely reflect ambient aquinits for several analytes possibly due to matrix interference. QC established based on acceptable LCS recoveries and result. This checklist is intended for use with the laboratory reporting formats typical of most projects. If "no" is answere	uifer conditionsults for ana	ons. ³ MS/M lytes with ac	ISD recoveries were outside QC eceptable recoveries. above checklist questions 1
	through 7, a more detailed Data Validation may be required, and a person knowledgeable in Data Validation protocols used if the project scope requires Data Validation from the onset.	should be o	consulted. T	This checklist should not be
	2. * = Based upon EPA Guidance and the applicable analytical method references. See reverse side of checklist for c	letails.		
	3. ** = Based upon EPA Guidance. Use these criteria on duplicate and sample results which exceed five times the replacement. Checked by:	ported detec	tion limit. S	See reverse side of checklist for



ANALYTICAL REPORT

PROJECT NO. 6468071950

FPL Turkey Point COL

Lot #: F8E300223

Al Tice

MACTEC Engineering and Cons. 3301 Atlantic Ave. Raleigh, NC 27604

TESTAMERICA LABORATORIES, INC.

Ivan Vania Project Manager

June 27, 2008

Case Narrative LOT NUMBER: F8E300223

This report contains the analytical results for the three samples received under chain of custody by TestAmerica St. Louis on May 30, 2008. These samples are associated with your FPL Turkey Point COL project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP-MS (SW846-6020)

Batch 8155134:

The MS (MSD) recoveries for calcium, potassium, magnesium, and sodium are outside the established QC limits. The analyte concentrations in the original samples are greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8E300223 (1): OW-706U

F8E300223 (2): OW-706L

F8E300223 (3): OW-621U

Batch 8155134:

The MS (MSD) recovery for iron is outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8E300223 (1): OW-706U

F8E300223 (2): OW-706L

F8E300223 (3): OW-621U

DCN# TUR512

Batch 8155134:

The MS (MSD) recovery for silicon is outside the established QC limits. Matrix interference is physically evident in the sample. The samples are high in salts. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8E300223 (1): OW-706U F8E300223 (2): OW-706L F8E300223 (3): OW-621U

Batch 8155134:

The Measured Intensity Mean for lead, as measured during the daily performance check, was low. However, the calibration and the second source checks were all within acceptable QC limits. The samples were reported with this narrative.

Affected Samples:

F8E300223 (1): OW-706U F8E300223 (2): OW-706L F8E300223 (3): OW-621U

Batch 8155134:

The samples were analyzed at a dilution due to high concentrations of salts. The reporting limits were adjusted for the dilution.

Affected Samples:

F8E300223 (1): OW-706U F8E300223 (2): OW-706L F8E300223 (3): OW-621U

Total Dissolved Solids (MCAWW 160.1)

Batch 8157081:

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limits were adjusted for the dilution since no analysis at a lesser dilution was performed.

Affected Samples:

F8E300223 (1): OW-706U F8E300223 (2): OW-706L F8E300223 (3): OW-621U

Anions (MCAWW 300.0A)

Poor matrix spike recovery for Nitrite in batch 8152136, Ortho Phosphate in batch 8152143, Bromide in batch 8152147, Fluoride in batch 8152149, and Nitrite in batch 8152151 is attributed to matrix interference. The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries.

Affected Samples:

F8E300223 (1): OW-706U F8E300223 (2): OW-706L F8E300223 (3): OW-621U

There were no other nonconformances or observations noted with any analysis on this lot.

METHODS SUMMARY

F8E300223

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
pH Aqueous	SW846 9040	SW846 9040
Alkalinity, Total	SM18 2320 B	SM18 2320 B
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Ion Balance (%Difference)	SM18 1030F & AP	SM18 1030F & AP
ICP-MS (6020)	SW846 6020	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.OA	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F8E300223

WO # 5	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
			•	
KN5JV	001	OW-706U	05/29/08	11:00
KN5J1	002	OW-706L	05/29/08	12:35
KN5J2	003	OW-621U	05/29/08	16:10
NOTE (S)):			

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH. porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Client Sample ID: OW-706U

TOTAL Metals

Lot-Sample # Date Sampled	Matrix:	WATER					
		REPORTING	+			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO	D	ANALYSIS DATE	ORDER #
Prep Batch #	- 8155134						
Calcium	725000 N	100000	ug/L	SW846	6020	06/11-06/24/08	KN5JVLAP
		Dilution Facto	- -	Analysis	Time: 16:25		
Iron	178 N	100	ug/L	SW846	6020	06/11-06/17/08	KN5JV1AQ
		Dilution Facto	or: 2	Analysis	Time: 02:53		_
Potassium	658000 N	100000	ug/L	SW846	6020	06/11-06/21/08	KN5JV1AR
		Dilution Facto	or: 1000	Analysis	Time: 22:46		
Magnesium	2150000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KN5JV1AT
		Dilution Facto	or: 1000	Analysis	Time: 22:46		
Manganese	43.5	4	ug/L	SW846	6020	06/11-06/17/08	KN5JV1AU
		Dilution Facto	or: 2	Analysis	Time: 02:53		
Sodium	17500000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KN5JV1AV
		Dilution Facto	or: 1000	Analysis	Time: 22:46		
Silicon	ND N	250000	ug/L	SW846	6020	06/11-06/21/08	KN5JV1AW
		Dilution Facto	or: 1000	Analysis	Time: 22:46		
Prep Batch # Silica		250	/T	Cuio 4 C	6020	06/11 06/21/00	231C TOT 3 Y
PITICS	1840	250 Dilution Factor	ug/L		6020 Time: 00:00	06/11-06/21/08	XALVUCKIA
		Directon race	<i>-</i>	MIGTYSES	11me 00:00		

N Spiked analyte recovery is outside stated control limits.

NOTE(S):

DCN# TUR512

Client Sample ID: OW-7060

General Chemistry

Lot-Sample #...: F8E300223-001 Work Order #...: KN5JV Matrix....: WATER

Date Sampled...: 05/29/08 11:00 Date Received..: 05/30/08

PARAMETER	RESULT	RL	UNITS	METHOL)	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (liquid)	7.2	0.10	No Units	SW846	9040	05/30/08	8154272
-		Dilution Fact	or: 1	Analysis	Time: 00:00		
Bicarbonate Alkalinity	10.2	5_0	mg/L	MCAWW	310.1	06/02/08	8154062
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Bromide	70.5	50.0	mg/L	MCAWW	300.0A	05/30/08	8152147
		Dilution Fact	or: 200	Analysis	Time: 11:22		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW	310.1	06/02/08	8154061
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Chloride	33300	2000	mg/L	MCAWW	300.0A	05/30/08	8152148
		Dilution Fact	or: 10000	Analysis	Time: 11:46		
Fluoride	ND	1.0	mg/L	MCAWW	300.0A	05/30/08	8152149
		Dilution Fact	or: 10	Analysis Time: 11:09			
Ion Balance Difference	1.1	0.10	g.	SM18 1	LO30F & API	06/24/08	8176456
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Nitrate	ND	4.0	mg/L	MCAWW	300.0A	05/30/08	8152152
		Dilution Fact	or: 200	Analysis	Time: 11:22		
Nitrite	ND	200	mg/L	MCAWW	A0.00E	05/30/08	8152151
		Dilution Fact	or: 10000	Analysis	Time: 11:46		
Nitrogen, as Ammonia	2090	200	ug/L	MCAWW	350.1	06/02/08	8154238
		Dilution Fact	or: 4	Analysis	Time: 00:00		
Sulfate	3850	500	mg/L	MCAWW	300.0A	05/30/08	8152150
		Dilution Fact	or: 1000	Analysis	Time: 11:34		
Total Alkalinity	204	5.0	mg/L	SM18 2	2320 B	06/02/08	8154059
•		Dilution Fact	or: 1	Analysis	Time: 00:00		
Total Dissolved Solids	40500	500	mg/L	MCAWW	160.1	06/05-06/06/08	8157081
		Dilution Fact	or: 100	Analysis	Time: 00:00		

Client Sample ID: OW-706L

TOTAL Metals

Lot-Sample # Date Sampled		-002 12:35 Date Receiv	eđ: 05/30/08	Matrix: WATER
		REPORTING		PREPARATION- WORK
PARAMETER	RESULT	LIMIT UNIT	S METHOD	ANALYSIS DATE ORDER #
Prep Batch #	.: 8155134			
Calcium	413000 N	100000 ug/L	SW846 6020	06/11-06/24/08 KN5J11AR
		Dilution Factor: 100	O Analysis Time: 16:28	
Iron	531 N	100 ug/L	SW846 6020	06/11-06/17/08 KN5J11AT
		Dilution Factor: 2	Analysis Time: 02:57	
Potassium	327000 N	100000 ug/L	SW846 6020	06/11-06/21/08 KN5J11AU
	<u></u>	Dilution Factor: 100		
Mornogism	1170000 N	50000 ug/L	SW846 6020	06/11-06/21/08 KN5J11AV
Magnesium	11/0000 N	50000 ug/L Dilution Factor: 100		· · ·
			•	
Manganese	8.3	4 ug/L	SW846 6020	06/11-06/17/08 KN5J11AW
		Dilution Factor: 2	Analysis Time: 02:57	
Sodium	9440000 N	50000 ug/L	SW846 6020	06/11-06/21/08 KN5J11AX
		Dilution Factor: 100	O Analysis Time: 22:59	
Silicon	ND N	250000 ug/L	SW846 6020	06/11-06/21/08 KN5J11A0
		Dilution Factor: 100		
Prep Batch #	.: 8175113			
Silica	7560	250 ug/L	SW846 6020	06/11-06/21/08 KN5J11A1
		Dilution Factor: 1	Analysis Time: 00:00	
NOTE(S):		<u> </u>		

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-706L

General Chemistry

Lot-Sample #...: F8E300223-002 Work Order #...: KN5J1 Matrix....: WATER

Date Sampled...: 05/29/08 12:35 Date Received..: 05/30/08

PARAMETER	RESULT	RL	UNITS	METHOI)	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (liquid)	7.3	0.10 Dilution Factor	No Units	SW846 Analysis	9040 Time: 00:00	05/30/08	8154272
Bicarbonate Alkalinity	9.6	5.0	mg/L	MCAWW	310.1	06/02/08	8154062
1		Dilution Fact	or: 1	Analysis	Time: 00:00		
Bromide	37.7 B	50.0	mg/L	MCAWW	300.0A	05/31/08	8152147
•		Dilution Facto	or: 200	Analysis	Time: 02:12		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW	310.1	06/02/08	8154061
		Dilution Facto	or: 1	Analysis	Time: 00:00		
Chloride	19100	2000	mg/L	MCAWW	300.0A	05/31/08	8152148
		Dilution Fact	or: 10000	Analysis	Time: 02:36		
Fluoride	ND	1.0	mg/L	MCAWW	300.0A	05/31/08	8152149
		Dilution Fact	or: 10	Analysis	Time: 02:00		
Ion Balance Difference	4.0	0.10	\$	SM18	1030F & API	06/24/08	8176456
		Dilution Facto	or: 1	Analysis	Time: 00:00		
Nitrate	ND	4.0	mg/L	MCAWW	300.0A	05/31/08	8152152
		Dilution Fact	or: 200	Analysis	Time: 02:12		
Nitrite	ND	200	mg/L	MCAWW	300.0A	05/31/08	8152151
		Dilution Fact	or: 10000	Analysis	Time: 02:36		
Nitrogen, as Ammonia	611	50.0	ug/L	MCAWW	350.1	06/02/08	8154238
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Sulfate	2280	100	mg/L	MCAWW	300.0A	05/31/08	8152150
		Dilution Fact	or: 200	Analysis	Time: 02:12		
Total Alkalinity	191	5.0	mg/L	SM18	2320 В	06/02/08	8154059
•		Dilution Fact	-	Analysis	Time: 00:00		
Total Dissolved Solids	17400	500	mg/L	MCAWW	160.1	06/05-06/06/08	8157081
•		Dilution Fact	or: 100	Analysis	Time: 00:00		

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Client Sample ID: OW-621U

TOTAL Metals

Lot-Sample #. Date Sampled.			Received.	.: 05/30/0	08	Matrix:	WATER
		REPORTIN				PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO	0	ANALYSIS DATE	ORDER #
Prep Batch #.	: 8155134 492000 N	100000	/T	SW846	6020	00/11 00/24/00	PARE 79131
Carcium	492000 N	100000 Dilution Fact	ug/L cor: 1000		Time: 16:32	06/11-06/24/08	KNOUZIAK
Iron	453 N	100	ug/L	SW846	6020	06/11-06/17/08	KN5J21AT
		Dilution Fact	or: 2	Analysis	Time: 03:01		
Potassium	476000 N	100000	ug/L	SW846	6020	06/11-06/21/08	KN5J21AU
		Dilution Fact	or: 1000	Analysis	Time: 23:03		
Magnesium	1600000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KN5J21AV
		Dilution Fact	or: 1000	Analysis	Time: 23:03		
Manganese	36.8	4	ug/L	SW846	6020	06/11-06/17/08	KN5J21AW
		Dilution Fact	or: 2	Analysis	Time: 03:01		
Sodium	13100000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KN5J21AX
		Dilution Fact	tor: 1000	Analysis	Time: 23:03		
Silicon	ND N	250000	ug/L	SW846	6020	06/11-06/21/08	KN5J21A0
		Dilution Fact	or: 1000	Analysis	Time: 23:03		
Prep Batch #.	: 8175113						
Silica	637	250	ug/L	SW846	6020	06/11-06/21/08	KN5J21A1
		Dilution Fact	tor: 1	Analysis	Time: 00:00		
NOTE(S):							

 $^{\,}N\,\,$ Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-621U

General Chemistry

Lot-Sample #...: F8E300223-003 Work Order #...: KN5J2 Matrix.....: WATER

Date Sampled...: 05/29/08 16:10 Date Received..: 05/30/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (liquid)	7.3	0.10 Dilution Fact	No Units	SW846 9040 Analysis Time: 00:00	05/30/08	8154272
Bicarbonate Alkalinity	9.4	5.0	mg/L	MCAWW 310.1	06/02/08	8154062
		Dilution Fact	or: 1	Analysis Time: 00:00		
Bromide	50.6	50.0	mg/L	MCAWW 300.0A	05/31/08	8152147
		Dilution Fact	or: 200	Analysis Time: 03:25		
Carbonate Alkalinity	· MID	5.0	mq/L	MCAWW 310.1	06/02/08	8154061
carbonace minarintely	***	Dilution Fact	•	Analysis Time: 00:00	00/02/00	0151001
Chloride	25500	2000	/T	MCAWW 300.0A	05/31/08	8152148
CHIOLIGE	25500	Dilution Fact	mg/L or: 10000	Analysis Time: 03:49	05/31/08	0132140
			1			
Fluoride	ND	1.0 Dilution Fact	mg/L	MCAWW 300.0A Analysis Time: 03:13	05/31/08	8152149
		Dilucion Fact	OF: IU	Analysis fine: 03:13		
Ion Balance Difference	2.7	0.10	*	SM18 1030F & API	06/24/08	8176456
		Dilution Fact	or: 1	Analysis Time: 00:00		
Nitrate	ND	4.0	mq/L	MCAWW 300.0A	05/31/08	8152152
		Dilution Fact	.	Analysis Time: 03:25		
Nitrite	ND	200	mq/L	MCAWW 300.0A	05/31/08	8152151
MICIICE	1412	Dilution Fact	J.	Analysis Time: 03:49	03/31/00	0132131
			_	-		
Nitrogen, as Ammonia	. 588	50.0	ug/L	MCAWW 350.1	06/02/08	8154238
•		Dilution Fact	or: 1	Analysis Time: 00:00		
Sulfate	3210	100	mg/L	MCAWW 300.0A	05/31/08	8152150
•		Dilution Fact	or: 200	Analysis Time: 03:25		
Total Alkalinity	189	5.0	mq/L	SM18 2320 B	06/02/08	8154059
		Dilution Fact		Analysis Time: 00:00	, ,	
Total Dissolved Solids	19400	500	mg/L	MCAWW 160.1	06/05-06/06/08	8157081
POTTO		Dilution Fact	or: 100	Analysis Time: 00:00		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #: F8E300223					Matr	ix WA	TER
		REPORTING	1			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHOD		ANALYSIS DATE	ORDER #
MB Lot-Sample :							
Calcium	ND	100	ug/L	SW846 602	20	06/11-06/24/08	KN8W91AA
		Dilution Fact					
		Analysis Time	: 15:38				
Iron	26.0 B	50	ug/L	SW846 602	20	06/11-06/17/08	KN8W91AC
		Dilution Facto	or: 1	-			
		Analysis Time	: 02:01				
Magnesium	ND	50	ug/L	SW846 602	20	06/11-06/21/08	KN8W91AE
		Dilution Facto	-		_ •	00, == 00, ==, 00	
		Analysis Time	: 21:52				
		-					
Manganese	ND	2	ug/L	SW846 602	20	06/11-06/17/08	KN8W91AF
		Dilution Facto	or: 1				
		Analysis Time	: 02:01				
Potassium	ND	100	ug/L	SW846 602	20	06/11-06/21/08	KNEWGIAD
10000010111	112	Dilution Facto	_	5,,010 00.	20	00/22 00/21/00	101011311125
		Analysis Time					
Silicon	ND	250	ug/L	SW846 602	20	06/11-06/21/08	KN8W91AH
		Dilution Fact	or: 1				
		Analysis Time	: 21:52				
Sodium	ND	50	uq/L	SW846 602	20	06/11-06/21/08	WNOWO TAC
DOCEMIN	ND	Dilution Fact	J.	DW0-10 00.	20	00/11 00/21/00	DAICWONDI
		Analysis Time					
·							
MB Lot-Sample		_				05/31 05/05/00	*********
Silica	ND	250	ug/L	SW846 603	20	06/11-06/21/08	KÕEK8 TAA

NOTE(S):

Dilution Factor: 1 Analysis Time..: 00:00

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

Matrix....: WATER

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8E300223

PARAMETER	RESULT	REPORTING LIMIT UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate		Work Order #: KN7R51AA	MB Lot-Sample #:	F8F020000-062	
Alkalinity					
	ND	5.0 mg/L	MCAWW 310.1	06/02/08	8154062
		Dilution Factor: 1			
		Analysis Time: 00:00			
Bromide		Work Order #: KPRDH1AA	MB Lot-Sample #:	F8E310000-147	
	ND	0.25 mg/L	MCAWW 300.0A	05/30/08	8152147
		Dilution Factor: 1			
		Analysis Time: 02:51			
Carbonate Alkalini		Work Order #: KN7RT1AA	MP Iot Comple #.	E8E020000 061	
Carbonate Arkarini	ND	5.0 mg/L	MCAWW 310.1	06/02/08	8154061
	ND	Dilution Factor: 1	MCAWW SIU.I	06/02/08	0124001
•		Analysis Time: 00:00			
		indigital index outou			
Chloride	·	Work Order #: KPRDJ1AA	MB Lot-Sample #:	F8E310000-148	
	ND	0.20 mg/L	MCAWW 300.0A	05/30/08	8152148
		Dilution Factor: 1			
		Analysis Time: 02:51			
Fluoride		Work Order #: KPRDK1AA	MB Lot-Sample #:	F8E310000-149	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ND	0.10 mg/L	MCAWW 300.0A	05/30/08	8152149
		Dilution Factor: 1			010111
		Analysis Time: 02:51			
NTS to see to a		Manala Condana H EDDDMIAA	MD Tab Gamala di	E0E220000 1F0	
Nitrate	NTO	Work Order #: KPRDN1AA	_		0150150
	ND	0.020 mg/L	MCAWW 300.0A	05/30/08	8152152
		Dilution Factor: 1 Analysis Time: 02:51			
		Analysis lime: 02:51			
Nitrite		Work Order #: KPRDM1AA	MB Lot-Sample #:	F8E310000-151	
	ND	0.020 mg/L	MCAWW 300.0A	05/30/08	8152151
		Dilution Factor: 1			
		Analysis Time: 02:51			
Nitrogen, as Ammon	12	Work Order #: KN7Q91AA	MR Lot-Sample #.	#8#020000 <u>-</u> 238	
Million as Million	ND	50.0 ug/L	MCAWW 350.1	06/02/08	8154238
	ND	Dilution Factor: 1	MCANN JJU.I	00/02/00	0134230
		Analysis Time: 00:00			
O. I Saka		March Order W MDDD 122	MD Tab Comple W	B0B310000 750	
Sulfate	MD	Work Order #: KPRDL1AA			0150150
	ND	0.50 mg/L	MCAWW 300.0A	05/30/08	8152150
		Dilution Pactor: 1 Analysis Time: 02:51			
		Andlysis lime: U2:31			

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8E300223

Matrix....: WATER

PARAMETER	RESULT	REPORTING LIMIT	G UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	ND	Work Order 5.0 Dilution Fact Analysis Time		MB Lot-Sample # SM18 2320 B	F8F020000-059 06/02/08	8154059
Total Dissolved Solids		Work Order	#: KPEAR1AA	MB Lot-Sample #	F8F050000-081	
23232	ND	5.0 Dilution Fact Analysis Time		MCAWW 160.1	06/05-06/06/08	8157081
MOTO (C)						

TOTAL Metals

Client Lot #:	F8E300223			Matrix	: WATER
PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: Calcium		(85 - 115)	tch #: 8155134 SW846 6020 or: 1 Analysis		KN8W91AJ
Iron	111		SW846 6020 or: 1 Analysis		KN8W91AK
Potassium	102		SW846 6020 or: 1 Analysis		KN8W91AL
Magnesium	100		SW846 6020 or: 1 Analysis		KN8W91AM
Manganese	108		SW846 6020 or: 1 Analysis		KN8W91AN
Sodium	98		SW846 6020 or: 1 Analysis		KN8W91AP
Silicon	105		SW846 6020 or: 1 Analysis		KN8W91AQ
LCS Lot-Sample#: Silica		_	st ch #: 8175113 SW846 6020	06/11-06/21/08	KQEK81AC

Analysis Time..: 00:00

Dilution Factor: 1

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Lot-Sample #...: F8E300223

Matrix....: WATER

	PERCENT	RECOVERY	RPD		PREPARATION-	PREP
PARAMETER	RECOVERY	LIMITS RPD	LIMITS 1	METHOD	ANALYSIS DATE	BATCH #
Nitrogen, as	Ammonia	WO#: KN7Q91AC	-LCS/KN7QS	91AD-LCSD LCS Lo	t-Sample#: F8F0	20000-238
	105	(90 - 110)	1	MCAWW 350.1	06/02/08	8154238
	108	(90 - 110) 2.1	(0-20) N	MCAWW 350.1	06/02/08	8154238
		Dilution Fac	tor: 1	Analysis Time: 0	0:00	

NOTE(S):

General Chemistry

Client	Tiot	#	F8E3	00223

Client Lot #	: F8E300223	Matrix WATER				
PARAMETER ph (liquid)	PERCENT RECOVERY	RECOVERY PREPARATION- PREPARATION- <th <="" colspan="4" td=""></th>				
Bicarbonate Alkalinity		Work Order #: KN7R51AC LCS Lot-Sample#: F8F020000-062				
	100	(90 - 110) MCAWW 310.1 06/02/08 8154062 Dilution Factor: 1 Analysis Time: 00:00				
Bromide	102	Work Order #: KPRDH1AC LCS Lot-Sample#: F8E310000-147 (90 - 110) MCAWW 300.0A 05/30/08 8152147 Dilution Factor: 1 Analysis Time: 02:38				
Carbonate Alkal	inity 100	Work Order #: KN7RT1AC LCS Lot-Sample#: F8F020000-061 (90 - 110) MCAWW 310.1 06/02/08 8154061 Dilution Factor: 1 Analysis Time: 00:00				
Chloride	94	Work Order #: KPRDJ1AC LCS Lot-Sample#: F8E310000-148 (90 - 110) MCAWW 300.0A 05/30/08 8152148 Dilution Factor: 1 Analysis Time: 02:38				
Fluoride	91	Work Order #: KPRDK1AC LCS Lot-Sample#: F8E310000-149 (90 - 110) MCAWW 300.0A 05/30/08 8152149 Dilution Factor: 1 Analysis Time: 02:38				
Nitrate	103	Work Order #: KPRDN1AC LCS Lot-Sample#: F8E310000-152 (90 - 110) MCAWW 300.0A 05/30/08 8152152 Dilution Factor: 1 Analysis Time: 02:38				
Nitrite	100	Work Order #: KPRDM1AC LCS Lot-Sample#: F8E310000-151 (90 - 110) MCAWW 300.0A 05/30/08 8152151 Dilution Factor: 1 Analysis Time: 02:38				
Sulfate	91	Work Order #: KPRDL1AC LCS Lot-Sample#: F8E310000-150 (90 - 110) MCAWW 300.0A 05/30/08 8152150 Dilution Factor: 1 Analysis Time: 02:38				
Total Alkalinit	100	Work Order #: KN7RG1AC LCS Lot-Sample#: F8F020000-059 (90 - 110) SM18 2320 B 06/02/08 8154059 Dilution Factor: 1 Analysis Time: 00:00				

(Continued on next page)

General Chemistry

Client Lot #...: F8E300223

Matrix WATER

PERCENT PARAMETER

RECOVERY LIMITS PREPARATION-ANALYSIS DATE

Analysis Time..: 00:00

PREP

Total Dissolved

RECOVERY

METHOD

Dilution Factor: 1

Work Order #: KPEAR1AC LCS Lot-Sample#: F8F050000-081

BATCH #

Solids

99

(86 - 115) MCAWW 160.1

06/05-06/06/08

8157081

NOTE(S):

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot # Date Sampled		0223 7/08 11:35 Date I	Received.	.: 05/2		Matrix	: WATER
PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS RPD	RPD LIMITS	METHOD	<u> </u>	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sampl	e #: F8E28	0143-001 Prep F	Batch #	.: 8155	134		
Calcium	0 N	(75 - 125)		SW846	6020	06/11-06/24/08	KNX8D1A0
	136 N	(75 - 125) 0.0 Dilution Fac Analysis Tim		SW846	6020	06/11-06/24/08	KNX8D1A1
Iron	62 N	(75 - 125)		SW846	6020	06/11-06/17/08	KNX8D1A2
	68 N	(75 - 125) 6.1	(0-20)			06/11-06/17/08	
		Dilution Fac Analysis Tim					
Magnesium	358 N	(75 - 125)		SW846	6020	06/11-06/21/08	KNX8D1A6
•	0 N	(75 - 125) 0.0	(0-20)	SW846	6020	06/11-06/21/08	KNX8DlA7
		Dilution Fac Analysis Tim					
Manganese	79	(75 - 125)		SW846	6020	06/11-06/17/08	KNX8D1A8
-	83	(75 - 125) 4.5 Dilution Pac Analysis Tim	tor: 2	SW846	6020	06/11-06/17/08	KNX8D1A9
Potassium	122 N	(75 - 125)		SW846	6020	06/11-06/21/08	KNX8D1A4
	ON	(75 - 125) 0.0 Dilution Fac Analysis Tim		SW846	•	06/11-06/21/08	
Silicon	182 N	(75 - 125)		SW846	6020	06/11-06/21/08	KNX8D1CD
	138 N,*	(75 - 125) 27 Dilution Fac Analysis Tim		SW846	6020	06/11-06/21/08	KNX8D1CE
Sodium	3360 N	(75 - 125)		SW846	6020	06/11-06/21/08	KNX8D1CA
	0 N	(75 - 125) 0.0 Dilution Pac Analysis Tin		SW846	6020	06/11-06/21/08	

NOTE(S)

N Spiked analyte recovery is outside stated control limits.

^{*} Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8E300223 Matrix....: WATER

Date Sampled...: 05/29/08 11:00 Date Received..: 05/30/08

PARAMETER Bromide	PERCENT RECOVERY 88 N	RECOVERY PREPARATION- PREP LIMITS METHOD ANALYSIS DATE BATCH # Work Order #: KN5JVLA3 MS Lot-Sample #: F8E300223-001 (90 - 110) MCAWW 300.0A 05/31/08 8152147 Dilution Factor: 200 Analysis Time: 11:22
Chloride	96	Work Order #: KN5JV1A5 MS Lot-Sample #: F8E300223-001 (90 - 110) MCAWW 300.0A 05/31/08 8152148 Dilution Factor: 10000 Analysis Time: 11:46
Fluoride	0.0	Work Order #: KN5JV1A7 MS Lot-Sample #: F8E300223-001 (90 - 110) MCAWW 300.0A 05/31/08 8152149 Dilution Factor: 10 Analysis Time: 11:09
Nitrate	109	Work Order #: KN5JV1CE MS Lot-Sample #: F8E300223-001 (90 - 110) MCAWW 300.0A 05/31/08 8152152 Dilution Factor: 200 Analysis Time: 11:22
Nitrite	131 N	Work Order #: KN5JV1CC MS Lot-Sample #: F8E300223-001 (90 - 110) MCAWW 300.0A 05/31/08 8152151 Dilution Factor: 10000 Analysis Time: 11:46
Nitrogen, as Am		Work Order #: KN46M1HW MS Lot-Sample #: F8E300179-001 (90 - 110) MCAWW 350.1 06/02/08 8154238 Dilution Factor: 1 Analysis Time: 00:00
Nitrogen, as Am		Work Order #: KN6XH1DT MS Lot-Sample #: F8E310160-003 (90 - 110) MCAWW 350.1 06/02/08 8154238 Dilution Factor: 1 Analysis Time: 00:00
Sulfate	92	Work Order #: KN5JV1A9 MS Lot-Sample #: F8E300223-001 (90 - 110) MCAWW 300.0A 05/31/08 8152150 Dilution Factor: 1000 Analysis Time: 11:34
Total Alkalinit		Work Order #: KN5J21A2 MS Lot-Sample #: F8E300223-003 (80 - 120) SM18 2320 B 06/02/08 8154059 Dilution Factor: 1 Analysis Time: 00:00

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Client Lot #...: F8E300223 Work Order #...: KN5JV-SMP Matrix.....: WATER

KN5JV-DUP

Date Sampled...: 05/29/08 11:00 Date Received..: 05/30/08

•	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	UNITS	RPD	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Bromide					SD Lot-Sample #:	F8E300223-001	
70.5	70.9	mg/L	0.61	(0-20)	MCAWW 300.0A	05/31/08	8152147
		Dilution Fa	ctor: 200) Ana	alysis Time: 11:22		
Chloride					SD Lot-Sample #:	F8E300223-001	
33300	34700	mg/L	4.2	(0-20)	MCAWW 300.0A	05/31/08	8152148
		Dilution Fa	ctor: 100	000 Ana	alysis Time: 11:46		
Fluoride					SD Lot-Sample #:	F8E300223-001	
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	05/30/08	8152149
		Dilution Fa	ctor: 10	Ana	alysis Time: 11:09		
Sulfate	-				SD Lot-Sample #:	F8E300223-001	
3850	3720	mg/L	3.2	(0-20)	MCAWW 300.0A	05/31/08	8152150
		Dilution Fa	ctor: 100	00 Ana	alysis Time: 11:34		
Nitrite					SD Lot-Sample #:	F8E300223-001	
MD	ND	mg/L	.0	(0-20)	MCAWW 300.0A	05/31/08	8152151
		Dilution Fa	ctor: 100	000 An a	alysis Time: 11:46		
Nitrate					SD Lot-Sample #:	F8E300223-001	
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	05/31/08	8152152
		Dilution Fa	ctor: 200) Ana	alysis Time: 11:22		
pH (liquid)					SD Lot-Sample #:	F8E300223-001	
7.2	7.2	No Unit	s 0.0	(0-0.0)	SW846 9040	05/30/08	8154272
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		

General Chemistry

Client Lot #...: F8E300223 Wo

Work Order #...: KN2LJ-SMP

Matrix....: WATER

Date Sampled...: 05/27/08 09:00 Date Received..: 05/28/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E290176-002	PREP BATCH #
71.0	73.0	mg/L Dilution Fac	2.8 tor: 1	(0-15) Ana	MCAWW 310.1 alysis Time: 00:00	06/02/08	8154062
Carbonate Alkalin	ity				SD Lot-Sample #:	F8E290176-002	
ND	ND .	mg/L Dilution Fac	0 tor: 1	(0-20) Ana	MCAWW 310.1 alysis Time: 00:00	06/02/08	8154061

General Chemistry

Client Lot #...: F8E300223

Work Order #...: KN2LW-SMP

Matrix....: WATER

KN2LW-DUP Date Sampled...: 05/27/08 09:35 Date Received..: 05/28/08

PARAM RESULT Bicarbonate	DUPLICATI RESULT	E UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE	PREP BATCH #
Alkalinity					DD HOC-Dampic π.	FGE250176-005	
55.0	52.0	mg/L	5.6	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		
Carbonate Alkal:	inity				SD Lot-Sample #:	F8E290176-003	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		

General Chemistry

Client Lot #...: F8E300223 Work Order #...: KN2NJ-SMP

Matrix: WATER

KN2NJ-DUP

Date Sampled...: 05/28/08 08:10 Date Received..: 05/29/08

PARAM RESULT Bicarbonate	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E290185-001	PREP BATCH #
Alkalinity 51.0	50.0	mg/L Dilution Fa	2.0 ctor: 1	(0-15) Ans	MCAWW 310.1 alysis Time: 00:00	06/02/08	8154062
Carbonate Alkali ND	nity ND	mg/L Dilution Fa	0 ctor: 1	(0-20) Ana	SD Lot-Sample #: MCAWW 310.1 alysis Time: 00:00	F8E290185-001 06/02/08	8154061

General Chemistry

Client Lot #...: F8E300223 Work Order #...: KN5J2-SMP Matrix.....: WATER

KN5J2-DUP

Date Sampled...: 05/29/08 16:10 Date Received..: 05/30/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E300223-003	PREP BATCH #
9.4	9.3	mg/L	1.6	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		
Carbonate Alkali	nity				SD Lot-Sample #:	F8E300223-003	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		
Total Alkalinity					SD Lot-Sample #:	F8E300223-003	
189	279	mg/L	38	(0-20)	SM18 2320 B	06/02/08	8154059
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		

General Chemistry

Client Lot #...: F8E300223 Work Order #...: KN46M-SMP

Matrix: WATER

KN46M-DUP

Date Sampled...: 05/29/08 09:45 Date Received..: 05/30/08

	DUPLICATE	_		RPD		PREPARATION-	PREP
PARAM RESULT	RESULT	<u>UNITS</u>	<u>RPD</u>	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Total Dissolved					SD Lot-Sample #:	F8E300179-001	
Solids							
900	770	mg/L	16	(0-15)	MCAWW 160.1	06/05-06/06/08	8157081
		Dilution Fac	tor: 10	Ana	lysis Time: 00:00		
Bicarbonate					SD Lot-Sample #:	F8E300179-001	
Alkalinity							
76.0	78.0	mg/L	2.6	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00		
Carbonate Alkali	nity				SD Lot-Sample #:	F8E300179-001	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00		
Nitrogen, as Amm	onia				SD Lot-Sample #:	F8E300179-001	
ND	ND	ug/L	0	(0-20)	MCAWW 350.1	06/02/08	8154238
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00	•	
pH (liquid)					SD Lot-Sample #:	F8E300179-001	
7.8	7.9	No Units	0.25	(0-0.0)	SW846 9040	05/30/08	8154272
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00		

General Chemistry

Client Lot #...: F8E300223 Work Order #..

Work Order #...: KN6XH-SMP KN6XH-DUP Matrix....: WATER

Date Sampled...: 05/30/08 09:45 Date Received..: 05/31/08

PARAM RESULT Total Dissolv	DUPLICATE RESULT ed	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E310160-003	PREP BATCH #
4780	5240	mg/L	9.2	(0-15)	MCAWW 160.1	06/05-06/06/08	9157091
4780	3240	Dilution Fac		• - •	lysis Time: 00:00	08/03-08/00/08	8137081
Bicarbonate Alkalinity					SD Lot-Sample #:	F8E310160-003	
121	120	mg/L	0.83	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00		٠
Carbonate Alk	alinity				SD Lot-Sample #:	F8E310160-003	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00		
Nitrogen, as	Ammonia				SD Lot-Sample #:	F8E310160-003	
ND	ND	ug/L	0	(0-20)	MCAWW 350.1	06/02/08	8154238
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00		

F8E300223

CLIENT ANALYSIS SUMMARY

SDG:

Storage Loc:

1-100

Project Manager: IV

Quote #: 79192

Date Received: Analytical Due Date: 2008-05-30 2008-06-20

Project:

6468071950

FPL Turkey Point COL

PO#.

200807151

Report to: Al Tice

Report Due Date: 2008-06-20\$

Client:

63036

MACTEC Engineering & Consulting Inc

#SMPS in LOT: 0

Report Type: W EDD Code: 00

Inform PM of any receiving issues.

SAMP	LE#	CLIE	NT SAMPL	<u>E 1D</u>	Site ID	Client Matrix	DATE/T	ME SAMPLED	WORKOR	DER	1	
1		OW-70	D6U			,	2008-05-2	29 / 1100	KN5JV	V	/ATER	
SAMP	LE C	<u>IBMMC</u>	VTS:	•		•						
SI	MH	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
CA	MH	SW846	6020	WATER, 5020, Metals	GJ	METALS, TOTAL - 2% HCL	. 01	STANDARD TEST SET	PROT: A	WRK	06	
SA	MH	\$W846	6020	WATER, Silica by calculation	OΧ	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06	
NA	МН	SW846	5020	WATER, 6020, Melais	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
MN	МН	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
MG	МН	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
KX	MH	SW846	5020	WATER, 6020, Metals	GĴ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06	
FE	МН	SW846	8020	WATER, 6020,	GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC	08	
XX	ZZ	NONE	NONE	Metals WATER, ZZ Code for	88	NO SAMPLE PREPARATION	. 01	STANDARD TEST SET	PROT: A	LOC .	06	ان مول
XX	AK	MCAW	160,1	invoicing WATER, 180.1, Solids,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	,16°F,
XX	C8	W MCAW	300.0A	Filterable "TOS" WATER, 300.0A,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	. 01	STANDARD TEST SET	PROT: A	LOC WRK	.06 -	
·xx	C9	MCAW	300.0A	Fluoride WATER, 300.0A, Nitrate as	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	WRK	.06	·
XX	СВ		310,1	N WATER, 310.1, Alkalinity,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	. 01	STANDARD TEST SET.	PROT: A	LOC WRK	06 .	•
XX	СХ	W MCAW	300.0A	WATER, 300.0A.	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	. 01	STANDARD TEST SET	PROT: A	WRK	. 06	
XX	CY	W MCAW	300.0A	Chloride WATER, 300.0A,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET.	PROT: A	LOC WRK	06	
XX	FJ	W SW846	9040	Sulfate WATER, 9040C,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	. 01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX		MCAW	300,0A	pH WATER, 300.0A,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC.	06	
XX	GO	W MCAW	300.0A	Bromide WATER, 300.0A, Nitrite as		PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT; A	LOC WRK	06	
XX	LV	W SM18	2320	N WATER, 2320 B, Alkalinity		PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX	SL	SM18	B 1030F &	Total WATER, 1030F & API, Ion		PERFORMED / DIRECT CALCULATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX.		MCAW	API	Balance WATER, 310.1, Alkalinity,	88	ONLY NO SAMPLE PREPARATION.	- •	STANDARD TEST SET	PROT: A	LOC	06	
		W		Bicarbonate		PERFORMED / DIRECT > * *				LOC		-
XX.	VM	MCAW W	300.1	WATER, 350.1, Nitrogen, Ammonia	. 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
SAMP	lF#	CLIE	NT SAMPL	E ID	Site ID	Client Matrix	DATE/T	IME SAMPLED	WORKOR	DER	1	

SAMPLE	E# CL	ENT SAMPL	<u>E ID</u>	Site ID	Client Matrix	DATE/TI	ME SAMPLED	WORKOR	DER	i	
2	OW	-706L				2008-05-2	29 / 1235	KN5J1	V	/ATE	२
SAMPLE	COMM	IENTS:	• •	,							
CA N	TH SW	146 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	•
SI N	VH SM	46 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	? ∂₹
SA N	MH SW	346 5020	WATER, Silica by calculation	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06	٠.
	MH swi	346 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
MN N	NH SW	46 6020	WATER, 6020, Meizis	GJ	METALS, TOTAL - 2% '	01	STANDARD TEST SET	PROT: A	WRK	06	•
MG N	NH swi	346 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
FE N	MH SW	346 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
KX N	MH SW	346 6020	WATER, 6020, Metals	. GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
XX Z	Z NOI	E NONE	WATER, ZZ Code for Invoicing	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK LOC	06	
TestAmeric	a - St Lo	uis Log	ged in by: WILSO!	NS 2008-	05-30 12:22:38	př	inted on: Friday, May 30, 2	2008 01:30 PM			Page 1 of 3

F8E300223

CLIENT ANALYSIS SUMMARY

SDG:

Storage Loc:

1-100

Project Manager: IV

Quote #: 79192

Date Received:

2008-05-30

Project: .

6468071950

FPL Turkey Point COL

Analytical Due Date:

2008-06-20

PO#:

200807151

Report Due Date: Report Type: W

2008-06-20

Report to: Al Tice

EDD Code: 00

Client:	63036	MACTEC Engineering & Consuming	#SMPS in LOT: 0
Inform PM of a	ny receiving issues.		

			•		. •						
					•		· .				
XX	AK	MCAW 160	0.1 WATER, 160.1, S Filterable "TDS"	88 ,abilos	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	C8	MCAW 300	0.0A WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	C9	MCAW 300	0.0A WATER, 300.0A,	Nitrate as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	CB	MCAW 310	0.1 WATER, 310.1, A Carbonate	Alkatinity, 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	СХ	MCAW 300	D.OA WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	CY	MCAW 300		88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	FJ	SW845 904	WATER, 9040C,	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	GM	MCAW 300	•	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	GĐ	MCAW 300		Nitrite as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
, XX	LV	SM18 232	20 WATER, 2320 B, Total	Alkalinity, 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	80	:41
XX	SL	SM18 103	OF & WATER, 1030F & Balance	API, Ion OX	CALCULATION	01	STANDARD TEST SET	PROT: A	WRK	06 .	
XX	UX	MCAW 310		likalinity, 8B	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	VM	MCAW 350		lltrogen, 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	٠
SAMP	LE#	CLIENT	SAMPLE ID	Site ID	Client Matrix	. DATE/T	IME SAMPLED	WORKOR	DER	Ĩ —	
3		OW-621L	3		•	2008-05-2	29 / 161D	KN5J2	. W	ATER	

	W	Ammonia	FERFORMED/ DIRECT		LOC
SAMPLE #	CLIENT SAMPL	EID Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER [
3	OW-621U		·	2008-05-29 / 1610	KN5J2 WATER
SAMPLE C	OMMENTS:		the state of the s	e o residencia	en en en en en en en en en en en en en e
, MN, MH	SW846 6020	WATER 6020, GJ		01 STANDARD TEST SET	PROT: A WRK 06
- SI MH	SW846 6020	WATER, 6020, G. G. G. G. G. G. G. G. G. G. G. G. G.	METALS, TOTAL - 2% HCL	01 STANDARD TEST, SET,	PROT: A WRK - 06 100 - LOC
NA MH	SW846 6020	WATER, 6020, GJ Metals	METALS, TOTAL - 2% HCL	01 STANDARD TEST SET	PROT: A WRK 06
KX MH	SW846 6020	WATER, 6020, GJ Metals	METALS, TOTAL - 2% HCL	01 STANDARD TEST SET	PROT: A WRK 06
FE MH	SW846 6020	WATER, 6020, GJ Metals	METALS, TOTAL - 2% HCL	01 STANDARD TEST SET	PROT: A WRK 06
CA MH	SW846 8020	WATER, 6020, GJ Metals	METALS, TOTAL - 2% HCL	01 STANDARD TEST SET	PROT: A WRK 06
SA MH	SW846 8020	WATER, Silica by OX calculation	CALCULATION ONLY .	9Q ORG FLAGS FOR INORG; STANDARD	PROT: A WRK 06 Loc
MG MH.	SW846 6020 :	WATER, 6020,	METALS, TOTAL - 2%	01 STANDARD TEST SET	PROT: A WRK 06
XX ZZ	NONE NONE	WATER, ZZ Code for 88 Invoicing	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX AK	MCAW 160.1 W	WATER, 160.1, Solids, 88 Filterable "TDS"	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX C8	MCAW 300.0A W	WATER, 300,0A, 88 Fluoride	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX C9	MCAW 300.0A	WATER, 300.0A, Nitrate as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX CB	MCAW 310.1 W	WATER, 310.1, Alkalinity, 88 Carbonate	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX CX	MCAW 300.0A W	WATER, 300.0A, 88 Chloride	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06 LOC .
XX CY	MCAW 300.0A W	WATER, 300.0A, 88 Sulfate	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX FJ	SW846 9040	WATER, 9040C, 88 pH	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX GM	MCAW 300.0A W	WATER, 300.0A, 88 Bromide	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX GO	MCAW 300.0A W	WATER, 300.0A, Nitrite as 88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX LV	SM18 2320 8	WATER, 2320 B, Alkalinity, 88 Total	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
XX SL	SM18 1030F& API	WATER, 1030F & API, Ion 0X Balance	ONLY	01 STANDARD TEST SET	PROT: A WRK 06
XX UX	MCAW 310.1 W	WATER, 310.1, Alkalinity, 88 Bicarbonate	NO SAMPLE PREPARATION PERFORMED / DIRECT	01 STANDARD TEST SET	PROT: A WRK 06
TestAmerica -	St. Louis Logg	ged in by: WILSONS 2006	3-05-30 12:22:3 8	printed on: Friday, May 30, 2	2008 01:30 PM Page 2 of

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CLIENT ANALYSIS SUMMARY F8E300223 Storage Loc: 1-100 Date Received: 2008-05-30 SDG: Quote #: 79192 Project Manager: IV Analytical Due Date: 2008-06-20 FPL Turkey Point COL 6468071950 Project: 2008-06-20 Report Due Date: PO#: 200807151 Report to: Al Tice Report Type: W MACTEC Engineering & Consulting Inc 63036 Client: 101 #SMPS in LOT: 0 EDD Code: 00 inform PM of any receiving issues. 01 STANDARD TEST SET XX VM MCAW 350.1 WATER, 350.1, Nitrogen, Ammonia NO SAMPLE PREPARATION PERFORMED / DIRECT PROT: A

TestAmerica - St. Louis Logged in by: WiLSONS 2008-05-30 12:22:38 printed on: Friday, May 30, 2008 01:30 PM

LOT# F8E300223

:38

Page 3 of 3

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Chain of	CURS	Temperature on Recelpt	<u>TestAmerica</u>				
Custody Record		Drinking Water? Yes□ No 🔀	THE LEADER IN ENVIRONMENTAL TESTING				
Client		Project Manager	Date OF SO				

TAL-4124 (1007)	· ·							·:													
Client	. :	Project	Manage	" <	1	ſ.	λ.		•	e					ate A	20	△ 0	,	Chain of Custody	Number	
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Project Name and Location (State) TURKEY POINT COL Contract/Purchase Order/Outole No.	. 4	Carrier	Waybill	Numbe	r				<u> </u>			闭	ette							•	
Turky Point COL		1	ا رح	3(e:	56	28	320	2 8	32	47	Z.	المجروع المجرو	315.4	1 1					Specia	i Instructi	ons/
Contract/Purchase Order/Quote No.				Matrix				Conta				ى ق ر					1 7	8	Conditi	ons of Re	ceipt
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Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time .	Alr	Sød.	Sail	Unpres	H2SO4	HNC3	ğ	12 SE SE SE SE SE SE SE SE SE SE SE SE SE	5	145	ずらさ		1	35	30-C	2	CAtions!	Calcu	m m
· 0W-706U	05/29/08	1100	X]		11	2			}			12	1			250		Potassiu	nagnes	AN
0W-706L		1235	X		<i>[</i>	1	2						12)			*	Potassiu	w, Silio	بهار
0W-621U	05/29/08	60	Х			1	2	1			.	[i]	12						PHISPAS	iv846 9	045(12)
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Possible Hazard Identification Non-Hazard Flammable Skin Imitant	☐ Poison B. 💢	i Unknowa		etum 1		, \		Dispose	al Alv	l sh	П	Archiv	e For _	Α.			may be than 1		sed if samples a	e retained	
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1. Relingvished By		Dale OS/2				<u> </u>	1. R	eceive	d By	Λ.	<u>~ (</u>								5-30-0	Time	~~ `&
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3. Relinquished By	11.	Date	· 	Time	9 ,		. 3. Fi	eceive	d By					· .			···		Date	, Time	
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Comments	t		•				· .				•								<u> </u>		

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

		A	. · Con	dition Ti	non Recei	nt Form		
Clie		COC/REAN	o: <u>063</u>		pon Recei		Date: _	5-30-09
. Ono	te No:	79/92 Initiated By:		MR			Time:	9:30
		+ 1	Shippin	g Inform	nation	•		<i>S</i>
	per Name:	<u> </u>			•	Multiple Pa		Х (Д)
Shrp 1.	oping # (s):*	2820 82776.	• •			Sample Ten	aperature (s):** 6.
2.	0.00	7.				2.		7.
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4. 5.	 	10.		· · · · · · · · · · · · · · · · · · ·		5.		9. 10.
	nbered shipping lines	s correspond to Numbered Sample Ter	np lines	**Sample	must be rece	ived at 4°C ± 2°C- If n	ot, note conte	ents below. Temperature
		for yes, "N" for no and "N/A" for not	- ·	ARTISTICE (I	Des MOI SIII	He torrowing: Met	ere-tiding ol	Rad tests-Liquid or Solids
1.	Q N	Are there custody seals prese		Y (Ñ	Are there custod	y seals pre	sent on bottles?
-		the cooler? Do custody seals on cooler a				 		appear to be tampered
2.	A/M. (G) Y	be tampered with?	9.	Y	N MY	with?		
3.	Y N	Were contents of cooler frisk opening, but before unpacking). A	N N/A	Was sample reco	sived with	proper pH ¹ ? (If not,
<u> </u>		Sample received with Chain	of					original TestAmerica
4.	(A, M	Custody?	1,1	. Y	N .	lab?		···
5.	Y N N/A	Does the Chain of Custody n sample ID's on the container		2. (Y)	N	Sample received	l in proper	containers?
-	Y (N)	Was sample received broken		3. Y	N (N/A)	Headspace in Vo	OA or TO	K liquid samples? (If
6.	 	Is sample volume sufficient:		, 1.	N (NA)	Yes, note sample ID	's below)	
	(Y)N	analysis?	14	1. Y	N	Was Internal CO	C/Worksh	are received?
7.	1 4 1	1			A EVCED			er i de la completa del completa de la completa del completa de la completa del la completa del la completa de la completa de la completa de la completa de la completa de la completa de la completa de la completa de la completa de la completa de la completa de
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	iners received m	ust be verif	ieu, encer	T VOA, TOX and soils		ا من المنظمين المنظمين المنظمين المنظمين المنظمين المنظمين المنظمين المنظمين المنظمين المنظمين المنظمين المنظم المنظمين المنظمين ال
<u> </u>	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	iners received m	ust be veri	ieu, excer	I VOA, TOX and soils		· San Andrews
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	iners received m	ust be veni	:	T VOA, TOX and soil		
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	ainers received m	ust be verif	:	T VOA, TOX and soils		
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	iners received m	ust be verif	:	T VOA, TOX and soils		
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	iners received m	ust be veni	ied, Encor	T VOA, TOX and soils		
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ied, incer			
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, Encer			
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, incer			
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, Encer			
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, iacer			
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, Encer			
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, Encer			
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, iacer			
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, Encer			
For	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, Encer			
Not	DOE-AL (Pantex, Lites:	ANL, Sandia) sites, pH of ALL contr	Property of the second		ieu, Encer			
Not	DOE-AL (Pantex, L	ANL, Sandia) sites, pH of ALL conta						

LOT# F8E300223



DOCUMENTATION OF TECHNICAL REVIEW SUBCONTRACTOR WORK PRODUCT

Project Name: Turkey Point COL Project

Project Number: 6468-07-1950

Project Manager: Scott Auger

Project Principal: Tom McDaniel

The report described below has been prepared by the named subcontractor retained in accordance with the MACTEC QAPD. The work and report have been reviewed by a MACTEC technically qualified person. Comments on the work or report, if any, have been satisfactorily addressed by the subcontractor. The attached report is approved in accordance with section QS-7 of MACTEC's QAPD.

The information and data contained in the attached report are hereby released by MACTEC for project use with the exception of the iron result for sample OW-606L. Iron was detected at a similar concentration in the associated method blank, both concentrations between the method detection limit and quantitation limit. Based on guidance from the US EPA (EPA 540-R-04-004), this result should be considered nondetect at the quantitation limit of 50 μ g/L. The iron concentrations reported for the remaining samples in this sample delivery group were significantly greater and likely reflect aquifer conditions. These data should be used with caution.

REPORT: Analytical Report Lot #: F8E290268	
SUBCONTRACTOR: <u>TestAmerica</u> , <u>Earth City</u> , <u>MO</u>	
DATE OF ACCEPTANCE : 7/23/2008	
TECHNICAL REVIEWER: William S. Grimes	With 12
PROJECT PRINCIPAL: Tom McDaniel	MMMQQ





Client Bechtel Power Corp. Laboratory TestAmerica Inc.

MACTEC Project <u>6468-07-1950</u> Data Report Number/Date <u>Lot# F8E290268/ 6-27-08</u>

	LABORATORY DATA REVIEW CHECKLIST	YES	<u>NO</u>	<u>NOT</u> <u>APPLICABLE</u>
1.	Laboratory analytical data report appears complete (all data results present for all samples submitted for analysis) and there are no apparent transcription errors:		<u>√¹</u>	
2.	Samples analyzed within applicable holding times (based on date of sample collection):*	✓		
3.	Trip blanks, field blanks or laboratory method blanks are free of blank contamination:		<u>√²</u>	
4.	If field duplicate samples collected, calculated results meet Relative Percent Difference guidelines: **			<u>✓</u>
5.	Surrogate recoveries (organic analyses only) within laboratory reported recovery acceptance ranges:			<u>✓</u>
6.	If Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples required to meet project objectives, Percent Recoveries (%R) and Relative Percent Difference (RPD) within laboratory reported acceptance ranges:		<u>√</u> ³	
7.	Reported detection limits meet project objectives (e.g., are capable of achieving applicable site standards):	<u>✓</u>		_
8.	Completed Chain-Of-Custody received noting sample/custody seal condition (with airbill, if appropriate):	<u>✓</u>		
9.	Analytical costs within authorized budget for these services:			<u>✓</u>
Notes:	COMMENTS: ¹ Iron results should be flagged indicating method blank contamination. ² An estimated concentration of in between the PQL and MDL. Iron concentrations in site samples were considerably higher, and likely reflect ambient at result should be qualified as nondetect at the quantitation limit of 50 µg/L. ³ MS/MSD recoveries were outside QC limits QC established based on acceptable LCS recoveries and results for analytes with acceptable recoveries. 1. This checklist is intended for use with the laboratory reporting formats typical of most projects. If "no" is answere through 7, a more detailed Data Validation may be required, and a person knowledgeable in Data Validation protocols used if the project scope requires Data Validation from the onset.	quifer condi for several a	tions with the inalytes positions of the	he exception of OW-606L. This sibly due to matrix interference. above checklist questions 1
	2. *= Based upon EPA Guidance and the applicable analytical method references. See reverse side of checklist for o	letails.		
	3. ** = Based upon EPA Guidance. Use these criteria on duplicate and sample results which exceed five times the redetails. Checked by:	ported detec	tion limit, S	See reverse side of checklist for



ANALYTICAL REPORT

PROJECT NO. 6468071950

FPL Turkey Point COL

Lot #: F8E290268

Al Tice

MACTEC Engineering and Cons. 3301 Atlantic Ave. Raleigh, NC 27604

TESTAMERICA LABORATORIES, INC.

Ivan Vania Project Manager

June 27, 2008

Case Narrative LOT NUMBER: F8E290268

This report contains the analytical results for the four samples received under chain of custody by TestAmerica St. Louis on May 29, 2008. These samples are associated with your FPL Turkey Point COL project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted on the following page.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by TestAmerica St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP-MS (SW846-6020)

Batch 8155134:

The MS (MSD) recoveries for calcium, potassium, magnesium, and sodium are outside the established QC limits. The analyte concentrations in the original samples are greater than four times the amount spiked, making percent recovery information ineffective. Method performance is demonstrated by acceptable LCS recovery.

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Affected Samples:

F8E290268 (1): OW-721U

F8E290268 (2): OW-721L

F8E290268 (3): OW-606U

F8E290268 (4): OW-606L

Batch 8155134:

The MS (MSD) recovery for iron is outside the established QC limits. The RPD is within method acceptance criteria indicating possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8E290268 (1): OW-721U

F8E290268 (2): OW-721L

F8E290268 (3): OW-606U

F8E290268 (4): OW-606L

Batch 8155134:

The MS (MSD) recovery for silicon is outside the established QC limits. Matrix interference is physically evident in the sample. The samples are high in salts. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F8E290268 (1): OW-721U

F8E290268 (2): OW-721L

F8E290268 (3): OW-606U

F8E290268 (4): OW-606L

Batch 8155134:

The Measured Intensity Mean for lead, as measured during the daily performance check, was low. However, the calibration and the second source checks were all within acceptable QC limits. The samples were reported with this narrative.

Affected Samples:

F8E290268 (1): OW-721U F8E290268 (2): OW-721L F8E290268 (3): OW-606U F8E290268 (4): OW-606L

Batch 8155134:

The samples were analyzed at a dilution due to high concentrations of salts. The reporting limits were adjusted for the dilution.

Affected Samples:

F8E290268 (1): OW-721U F8E290268 (2): OW-721L F8E290268 (3): OW-606U F8E290268 (4): OW-606L

Total Dissolved Solids (MCAWW 160.1)

Batch 8156338:

The samples were analyzed at a dilution due to high concentrations of target analytes. The reporting limits were adjusted for the dilution since no analysis at a lesser dilution was performed.

Affected Samples:

F8E290268 (1): OW-721U F8E290268 (2): OW-721L F8E290268 (3): OW-606U F8E290268 (4): OW-606L

Anions (MCAWW 300.0A)

Poor matrix spike recovery for Sulfate in batch 8151365 and Nitrite in batch 8151366 is attributed to matrix interference. The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries.

Affected Samples:

F8E290268 (1): OW-721U F8E290268 (2): OW-721L F8E290268 (3): OW-606U F8E290268 (4): OW-606L

There were no other nonconformances or observations noted with any analysis on this lot.

DCN# TUR512

METHODS SUMMARY

F8E290268

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
pH Aqueous	SW846 9040	SW846 9040
Alkalinity, Total	SM18 2320 B	SM18 2320 B
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Ion Balance (%Difference)	SM18 1030F & AP	SM18 1030F & AP
ICP-MS (6020)	SW846 6020	
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Nitrogen, Ammonia	MCAWW 350.1	MCAWW 350.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

MCAWW	"Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.
SM18	"Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.
SW846	"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". Third Edition, November 1986 and its updates.

SAMPLE SUMMARY

F8E290268

WO # SAMPLE# CLIENT SAMPLE ID	SAMPLED SAMP DATE TIME
KN3HJ 001 OW-721U	05/28/08 11:00
KN3JD 002 OW-721L	05/28/08 13:25
KN3JR 003 OW-606U	05/28/08 16:10
KN3JT 004 OW-606L	05/28/08 15:40

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Matrix....: WATER

06/11-06/21/08 KN3HJLAV

06/11-06/21/08 KN3HJ1A0

MACTEC Engineering & Consulting Inc

Client Sample ID: OW-721U

TOTAL Metals

Date Sampled...: 05/28/08 11:00 Date Received..: 05/29/08 REPORTING PREPARATION-WORK METHOD RESULT LIMIT UNITS ANALYSIS DATE ORDER # Prep Batch #...: 8155134 Calcium 603000 N 100000 ug/L SW846 6020 06/11-06/24/08 KN3HJ1AN Analysis Time..: 16:03 Dilution Factor: 1000 329 N 100 SW846 6020 Iron uq/L 06/11-06/17/08 KN3HJ1AP Dilution Factor: 2 Analysis Time..: 02:28 Potassium 569000 N 100000 ug/L SW846 6020 06/11-06/21/08 KN3HJ1AQ Dilution Factor: 1000 Analysis Time..: 22:30 50000 SW846 6020 Magnesium 1890000 N ug/L 06/11-06/21/08 KN3HJ1AR Dilution Factor: 1000 Analysis Time..: 22:30 SW846 6020 06/11-06/17/08 KN3HJ1AT Manganese 58.1 ug/L Dilution Factor: 2 Analysis Time..: 02:28 Sodium 15400000 N 50000 ug/L SW846 6020 06/11-06/21/08 KN3HJ1AU

Analysis Time..: 22:30

Analysis Time..: 22:30

Analysis Time..: 00:00

SW846 6020

SW846 6020

Dilution Factor: 1000

Dilution Factor: 1000

Dilution Factor: 1

ug/L

uq/L

250000

250

NOTE(S):

Silica

Silicon

Prep Batch #...: 8175113

ND N

848

Lot-Sample #...: F8E290268-001

N Spiked analyte recovery is outside stated control limits.

Client Sample ID: OW-721U

General Chemistry

Lot-Sample #...: F8E290268-001 Work Order #...: KN3HJ Matrix.....: WATER

Date Sampled...: 05/28/08 11:00 Date Received..: 05/29/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (liquid)	7.3	0.10	No Units	SW846 9040	05/29/08	8151296
Par (and and		Dilution Facto		Analysis Time: 00:00		
Bicarbonate Alkalinity	8.2	5.0	mg/L	MCAWW 310.1	06/02/08	8154062
		Dilution Facto	or: 1	Analysis Time: 00:00		
Bromide	60.1	50.0	mg/L	MCAWW 300.0A	05/30/08	8151362
		Dilution Facto	or: 200	Analysis Time: 12:27		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW 310.1	06/02/08	8154061
		Dilution Facto	or: 1	Analysis Time: 00:00		
Chloride	29900	2000	mg/L	MCAWW 300.0A	05/30/08	8151363
		Dilution Facto	or: 10000 ,	Analysis Time: 12:51		
Fluoride	ND	20.0	mg/L	MCAWW 300.0A	05/30/08	8151364
		Dilution Facto	or: 200	Analysis Time: 12:27		
Ion Balance Difference	2.8	0.10	8	SM18 1030F & API	06/24/08	8176456
		Dilution Facto	or: 1	Analysis Time: 00:00		
Nitrate	ND	0.20	mg/L	MCAWW 300.0A	05/30/08	8151367
		Dilution Facto	or: 10	Analysis Time: 12:14		
Nitrite	ND	200	mg/L	MCAWW 300.0A	05/30/08	8151366
		Dilution Facto	or: 10000	Analysis Time: 12:51		
Nitrogen, as Ammonia	1680	200	ug/L	MCAWW 350.1	05/30/08	8150453
		Dilution Facto	or: 4	Analysis Time: 00:00		•
Sulfate	3860	100	mg/L	MCAWW 300.0A	05/30/08	8151365
		Dilution Fact	or: 200	Analysis Time: 12:27		
Total Alkalinity	164	5.0	mg/L	SM18 2320 B	06/02/08	8154059
		Dilution Fact	or: 1	Analysis Time: 00:00		
Total Dissolved Solids	45400	500	mg/L	MCAWW 160.1	06/04-06/05/08	8156338
		Dilution Fact	or: 100	Analysis Time: 00:00		

Client Sample ID: OW-721L

TOTAL Metals

Lot-Sample # Date Sampled	Matrix:	WATER					
		REPORTING	}			PREPARATION-	WORK
PARAMETER	RESULT	LIMIT	UNITS	METHO	D	ANALYSIS DATE	ORDER #
Prep Batch #	: 8155134						•
Calcium	667000 N	100000	ug/L	SW846	6020	06/11-06/24/08	KN3JD1AN
		Dilution Facto	or: 1000	Analysis	Time: 16:06		
Iron	362 N	100	ug/L	SW846	6020	06/11-06/17/08	KN3JD1AP
		Dilution Facto	or: 2	Analysis	Time: 02:32		
Potassium	587000 N	100000	ug/L	SW846	6020	06/11-06/21/08	KN3JD1AQ
		Dilution Facto	or: 1000	Analysis	Time: 22:34	•	
Magnesium	2020000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KN3JD1AR
		Dilution Facto	or: 1000	Analysis	Time: 22:34		
Manganese	46.2	4	ug/L	SW846	6020	06/11-06/17/08	KN3JD1AT
		Dilution Facto	or: 2	Analysis	Time: 02:32		
Sodium	16300000 N	50000	ug/L	SW846	6020	06/11-06/21/08	KN3JD1AU
		Dilution Facto	or: 1000	Analysis	Time: 22:34		
Silicon	ND N	250000	ug/L	SW846	6020	06/11-06/21/08	KN3JDLAV
		Dilution Facto	or: 1000	Analysis	Time: 22:34		
Prep Batch #	: 8175113						
Silica	3170	250	ug/L		6020	06/11-06/21/08	KN3JD1A0
		Dilution Facto	or: 1	Analysis	Time: 00:00		

N Spiked analyte recovery is outside stated control limits.

NOTE (S):

Client Sample ID: OW-721L

General Chemistry

Lot-Sample #...: F8E290268-002 Work Order #...: KN3JD Matrix.....: WATER

Date Sampled...: 05/28/08 13:25 Date Received..: 05/29/08

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
рН (liquid)	7.3	0.10 Dilution Fact	No Units	SW846 9040 Analysis Time: 00:00	05/29/08	8151296
Bicarbonate Alkalinity	9.0	5.0	mg/L	MCAWW 310.1	06/02/08	8154062
		Dilution Fact	or: 1	Analysis Time: 00:00		
Bromide	64.9	50.0	mg/L	MCAWW 300.0A	05/30/08	8151362
•		Dilution Fact	or: 200	Analysis Time: 04:30		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW 310.1	06/02/08	8154061
_		Dilution Fact	or: 1	Analysis Time: 00:00		
Chloride	31100	2000	mg/L	MCAWW 300.0A	05/30/08	8151363
		Dilution Fact		Analysis Time: 04:54	• • •	
Fluoride	ND	20.0	mq/L	MCAWW 300.0A	05/30/08	8151364
		Dilution Fact	or: 200	Analysis Time: 04:30	, , , , , ,	
Ion Balance Difference	1.7	0.10	%	SM18 1030F & API	06/24/08	8176456
		Dilution Fact	or: 1	Analysis Time: 00:00		
Nitrate	ND	0.20	mg/L	MCAWW 300.0A	05/30/08	8151367
		Dilution Fact	or: 10	Analysis Time: 04:18		
Nitrite	ND	200	mg/L	MCAWW 300.0A	05/30/08	8151366
		Dilution Fact	or: 10000	Analysis Time: 04:54		
Nitrogen, as Ammonia	1820	200	ug/L	MCAWW 350.1	05/30/08	8150453
		Dilution Fact	or: 4	Analysis Time: 00:00		
Sulfate	3990	100	mg/L	MCAWW 300.0A	05/30/08	8151365
		Dilution Fact	or: 200	Analysis Time: 04:30		
Total Alkalinity	180	5.0	mg/L	SM18 2320 B	06/02/08	8154059
		Dilution Fact	or: 1	Analysis Time: 00:00		
Total Dissolved Solids	54600	500	mg/L	MCAWW 160.1	06/04-06/05/08	8156338
		Dilution Fact	or: 100	Analysis Time: 00:00		

DCN# TUR512

Client Sample ID: OW-606U

TOTAL Metals

Lot-Sample #...: F8E290268-003 Matrix....: WATER
Date Sampled...: 05/28/08 16:10 Date Received..: 05/29/08

PARAMETER	RESULT	REPORTING LIMIT	<u>UNITS</u>	METHO	0	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch # Calcium	: 8155134 535000 N	100000 Dilution Facto	ug/L r: 1000	SW846 Analysis	6020 Time: 16:10	06/11-06/24/08	KN3JR1AN
Iron	318 N	100 Dilution Facto	ug/L r: 2	SW846 Analysis	6020 Time: 02:36	06/11-06/17/08	KN3JR1AP
Potassium	525000 N	100000 Dilution Facto	ug/L r: 1000	SW846 Analysis	6020 Time: 22:38	06/11-06/21/08	KN3JR1AQ
Magnesium	1730000 N	50000 Dilution Facto	ug/L r: 1000	SW846 Analysis	6020 Time: 22:38	06/11-06/21/08	KN3JR1AR
Manganese	35.4	4 Dilution Facto	ug/L r: 2	SW846 Analysis	6020 Time: 02:36	06/11-06/17/08	KN3JR1AT
Sodium	14400000 N	50000 Dilution Facto	ug/L r: 1000	SW846 Analysis	6020 Time: 22:38	06/11-06/21/08	KN3JR1AU
Silicon	ND N	250000 Dilution Facto	ug/L r: 1000	SW846 Analysis	6020 Time: 22:38	06/11-06/21/08	KN3JR1AV
Prep Batch # Silica	: 8175113 729	250 Dilution Facto	ug/L r: 1	SW846 Analysis	6020 Time: 00:00	06/11-06/21/08	KN3JR1A0

N Spiked analyte recovery is outside stated control limits.

NOTE(S):

Client Sample ID: OW-606U

General Chemistry

Lot-Sample #...: F8E290268-003 Work Order #...: KN3JR Matrix..... WATER

Date Sampled...: 05/28/08 16:10 Date Received..: 05/29/08

PARAMETER	RESULT	RL.	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (liquid)	7.4	0.10 Dilution Facto	No Units	SW846 9040 Analysis Time: 00:00	05/29/08	8151296
Bicarbonate Alkalinity	7.8	5.0	mg/L	MCAWW 310.1	06/02/08	8154062
		Dilution Facto	r: 1	Analysis Time: 00:00		
Bromide	56 .6	50.0 Dilution Facto	mg/L or: 200	MCAWW 300.0A Analysis Time: 03:41	05/30/08	8151362
	•			•		
Carbonate Alkalinity	ŇD	5.0	mg/L	MCAWW 310.1	06/02/08	8154061
		Dilution Facto	r: 1	Analysis Time: 00:00		
Chloride	27900	2000	mg/L	MCAWW 300.0A	05/30/08	8151363
		Dilution Facto	r: 10000	Analysis Time: 04:06		
Fluoride	ND	20.0	mg/L	MCAWW 300.0A	05/30/08	8151364
Tuotiao	110	Dilution Facto	٥.	Analysis Time: 03:41	03/30/00	0131304
					•	
Ion Balance Difference	2.7	0.10	용	SM18 1030F & API	06/24/08	8176456
Difference		Dilution Facto	r: 1	Analysis Time: 00:00		
				-		
Nitrate	ND	0.20	mg/L	MCAWW 300.0A	05/30/08	8151367
		Dilution Facto	or: 10	Analysis Time: 03:29		
Nitrite	ND	200	mg/L	MCAWW 300.0A	05/30/08	8151366
		Dilution Facto	r: 10000	Analysis Time: 04:06	•	•
Nitrogon og Ammonia	944	50.0	uq/L	MCAWW 350.1	05/30/08	0150452
Nitrogen, as Ammonia	044	Dilution Facto		Analysis Time: 00:00	05/30/08	8150453
Sulfate	3470	100	mg/L	MCAWW 300.0A	05/30/08	8151365
		Dilution Facto	or: 200	Analysis Time: 03:41		
Total Alkalinity	155	5.0	mg/L	SM18 2320 B	06/02/08	8154059
_		Dilution Facto	r: 1	Analysis Time: 00:00		
Total Dissolved Solids	43100	500	mg/L	MCAWW 160.1	06/04-06/05/08	8156338
DOTTOR		Dilution Facto	or: 100	Analysis Time: 00:00		

Client Sample ID: OW-606L

TOTAL Metals

Lot-Sample # Date Sampled	Matrix:	WATER					
PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHO	D	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #	: 8155134						
Calcium	632000 N	100000 Dilution Factor	ug/L or: 1000	SW846 Analysis	6020 Time: 16:21	06/11-06/24/08	KN3JTLAN
Iron	88.2 BN	100 Dilution Facto	ug/L or: 2	SW846 Analysis	6020 Time: 02:49	06/11-06/17/08	KN3JT1AP
Potassium	549000 N	100000 Dilution Facto	ug/L or: 1000	SW846 Analysis	6020 Time: 22:42	06/11-06/21/08	KN3JT1AQ
Magnesium	1880000 N	50000 Dilution Facto	ug/L or: 1000	SW846 Analysis	6020 Time: 22:42	06/11-06/21/08	KN3JT1AR
Manganese	39.1	4 Dilution Facto	ug/L or: 2	SW846 Analysis	6020 · Time: 02:49	06/11-06/17/08	KN3JT1AT
Sodium	15100000 N	50000 Dilution Facto	ug/L or: 1000		6020 Time: 22:42	06/11-06/21/08	KN3JT1AU
Silicon	ND N	250000 Dilution Factor	ug/L or: 1000	SW846 Analysis	6020 Time: 22:42	06/11-06/21/08	KN3JT1AV
Prep Batch # Silica	: 8175113 2630	250 Dilution Facto	ug/L or: 1	SW846 Analysis	6020 Time: 00:00	06/11-06/21/08	KN3JT1A0

N Spiked analyte recovery is outside stated control limits.

NOTE(S):

Client Sample ID: OW-606L

General Chemistry

PARAMETER	RESULT	RL	UNITS	METHOD)	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (liquid)	7.3	0.10 Dilution Facto	No Units	SW846 Analysis	9040 Time: 00:00	05/29/08	8151296
Bicarbonate Alkalinity	8.2	5.0	mg/L	MCAWW	310.1	06/02/08	8154062
		Dilution Facto	or: 1	Analysis	Time: 00:00		
Bromide	62.5	50.0	mg/L	MCAWW	300.0A	05/30/08	8151362
		Dilution Facto	or: 200	Analysis	Time: 05:43		
Carbonate Alkalinity	ND	5.0	mg/L	MCAWW	310.1	06/02/08	8154061
Carbonace rimarine,	112	Dilution Facto	-		Time: 00:00	30, 02, 00	0131001
Chloride	29600	2000	mq/L	MCAWW	300.0A	05/30/08	8151363
CHIOLIGE	25000	Dilution Facto	J .		Time: 06:07	03,30,00	0131303
/ -		20.2		MCDIT	200 07	25/20/20	0757064
Fluoride	ND	20.0 Dilution Factor	mg/L or: 200		300.0A Time: 05:43	05/30/08	8151364
Ion Balance	3.2	0.10	ક	SM18 1	.030F & API	06/24/08	8176456
Difference		Dilution Facto	or: 1	Analysis	Time: 00:00		
				-			
Nitrate	ND	0.20	mg/L		300.0A	05/30/08	8151367
		Dilution Fact	or: 10	Analysis	Time: 05:31		
Nitrite	ND	200	mg/L	MCAWW	300.0A	05/30/08	8151366
		Dilution Fact	or: 10000	Analysis	Time: 06:07		
Nitrogen, as Ammonia	1580	200	uq/L	MCAWW	350.1	05/30/08	8150453
		Dilution Fact	٥.	Analysis	Time: 00:00	• •	
0-15	2050	100	m~ /T	WCZ WW	300.0A	05/30/08	8151365
Sulfate	3860	Dilution Fact	mg/L or: 200		Time: 05:43	05/30/08	0121202
				•			
Total Alkalinity	165	5.0	mg/L		2320 B	06/02/08	8154059
		Dilution Fact	or: 1	Analysis	Time: 00:00		
Total Dissolved Solids	49100	500	mg/L	MCAWW	160.1	06/04-06/05/08	8156338
		Dilution Fact	or: 100	Analysis	Time: 00:00		

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: F8E290268 Matrix....: WATER REPORTING PREPARATION-WORK RESULT LIMIT UNITS METHOD ANALYSIS DATE ORDER # MB Lot-Sample #: F8F030000-134 Prep Batch #...: 8155134 Calcium ND 100 ug/L SW846 6020 06/11-06/24/08 KN8W91AA Dilution Factor: 1 Analysis Time..: 15:38 26.0 B ug/L SW846 6020 06/11-06/17/08 KN8W91AC Iron Dilution Factor: 1 Analysis Time..: 02:01 ND 50 ug/L SW846 6020 06/11-06/21/08 KN8W91AE Magnesium Dilution Factor: 1 Analysis Time..: 21:52 SW846 6020 06/11-06/17/08 KN8W91AF Manganese ND ug/L Dilution Factor: 1 Analysis Time..: 02:01 Potassium ND 100 ug/L SW846 6020 06/11-06/21/08 KN8W91AD Dilution Factor: 1 Analysis Time..: 21:52 Silicon ND 250 ug/L SW846 6020 06/11-06/21/08 KN8W91AH Dilution Factor: 1 Analysis Time..: 21:52 Sodium ND 50 SW846 6020 06/11-06/21/08 KN8W91AG ug/L Dilution Factor: 1 Analysis Time..: 21:52 MB Lot-Sample #: F8F230000-113 Prep Batch #...: 8175113 250 ug/L SW846 6020 06/11-06/21/08 KQEK81AA Silica Dilution Factor: 1 Analysis Time..: 00:00

Calculations are performed before rounding to avoid round-off errors in calculated results.

NOTE(S):

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8E290268

Matrix....: WATER

PARAMETER	RESULT	REPORTING LIMIT UNI	TS	METHOD		PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate Alkalinity		Work Order #: K	N7R51AA	MB Lot-Sample	#:		======================================
_	ND	5.0 mg/S Dilution Factor: 1 Analysis Time: 00		MCAWW 310.1		06/02/08	8154062
Bromide	ND	Work Order #: K 0.25 mg/i Dilution Factor: 1 Analysis Time: 06	L	MB Lot-Sample MCAWW 300.0A	#:	F8E300000-362 05/29/08	8151362
Carbonate Alkalin	ity ND	Work Order #: K 5.0 mg/ Dilution Factor: 1 Analysis Time: 00	L	MB Lot-Sample MCAWW 310.1	#:	F8F020000-061 06/02/08	8154061
Chloride	ND .	Work Order #: K 0.20 mg/ Dilution Factor: 1 Analysis Time: 06	L	MB Lot-Sample MCAWW 300.0A	#:	F8E300000-363 05/29/08	8151363
Fluoride	ND	Work Order #: K. 0.10 mg/ Dilution Factor: 1 Analysis Time: 06	L	MB Lot-Sample MCAWW 300.0A	#:	F8E300000-364 05/29/08	8151364
Nitrate	ND	Work Order #: K 0.020 mg/ Dilution Factor: 1 Analysis Time: 06	L	MB Lot-Sample MCAWW 300.0A	#:	F8E300000-367 05/29/08	8151367
Nitrite	ND	Work Order #: K 0.020 mg/ Dilution Factor: 1 Analysis Time: 06	L	MB Lot-Sample MCAWW 300.0A	#:	F8E300000-366 05/29/08	8151366
Nitrogen, as Ammo	nia ND	Work Order #: K 50.0 ug/ Dilution Factor: 1 Analysis Time: 00	L	MB Lot-Sample MCAWW 350.1	#:	F8E290000-453 05/30/08	8150453
Sulfate	ND	Work Order #: K 0.50 mg/ Dilution Factor: 1 Analysis Time: 06	L	MB Lot-Sample MCAWW 300.0A	#:	F8E300000-365 05/29/08	8151365

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F8E290268

Matrix....: WATER

PARAMETER	RESULT	REPORTING LIMIT UNITS	S METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity	ND	Work Order #: KN 5.0 mg/L Dilution Factor: 1 Analysis Time: 00:	SM18 2320 B	: F8F020000-059 06/02/08	8154059
Total Dissolved Solids		Work Order #: KPC	C5L1AA MB Lot-Sample #	: F8F040000-338	
	ND	5.0 mg/L Dilution Factor: 1 Analysis Time: 00:	MCAWW 160.1	06/04-06/05/08	8156338
MOTER (C).			•		

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #:	F8E290268		Matrix: WATER
PARAMETER		RECOVERY LIMITS METHOD	PREPARATION- ANALYSIS DATE WORK ORDER #
	105	134 Prep Batch #: 8155134 (85 - 115) SW846 6020 Dilution Factor: 1 Analysis	06/11-06/24/08 KN8W91AJ
Iron	111	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Potassium	102	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Magnesium	100	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Manganese	108	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Sodium	98	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	· · · · · · · · · · · · · · · · · · ·
Silicon	105	(85 - 115) SW846 6020 Dilution Factor: 1 Analysis	
Silica		113 Prep Batch #: 8175113 (0.0- 0.0) SW846 6020 Dilution Factor: 1 Analysis	06/11-06/21/08 KQEK81AC

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: F8E290268

Matrix....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrogen, as	Ammonia	WO#:KN3VT1AC	-LCS/KN3	VT1AD-LCSD LCS	Lot-Sample#: F8E2	90000-453
	100	(90 - 110)		MCAWW 350.1	05/30/08	8150453
	99	(90 - 110) 0.77	(0-20)	MCAWW 350.1	05/30/08	8150453
		Dilution Fac	tor: 1	Analysis Time:	00:00	

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Matrix....: WATER

05/29/08 8151366

05/29/08 8151365

06/02/08 8154059

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

	PERCENT	RECOVERY PREPARATION- PREP
PARAMETER	RECOVERY	
pH (liquid)	* * * * * * * * * * * * * * * * * * * *	Work Order #: KN5JA1AA LCS Lot-Sample#: F8E300000-296
	100	,
		Dilution Factor: 1 Analysis Time: 00:00
Bicarbonate Alkalinity		Work Order #: KN7R51AC LCS Lot-Sample#: F8F020000-062
_	100	(90 - 110) MCAWW 310.1 06/02/08 8154062
		Dilution Factor: 1 Analysis Time: 00:00
Bromide		Work Order #: KPR011AC LCS Lot-Sample#: F8E300000-362
	97	(90 - 110) MCAWW 300.0A 05/29/08 8151362
		Dilution Factor: 1 Analysis Time: 06:34
Carbonate Alka	linity	Work Order #: KN7RT1AC LCS Lot-Sample#: F8F020000-061
	100	(90 - 110) MCAWW 310.1 06/02/08 8154061
		Dilution Factor: 1 Analysis Time: 00:00
Chloride		Work Order #: KPR071AC LCS Lot-Sample#: F8E300000-363
	95	(90 - 110) MCAWW 300.0A 05/29/08 8151363
		Dilution Factor: 1 Analysis Time: 06:34
Fluoride		Work Order #: KPR091AC LCS Lot-Sample#: F8E300000-364
	91	(90 - 110) MCAWW 300.0A 05/29/08 8151364
		Dilution Factor: 1 Analysis Time: 06:34
Nitrate		Work Order #: KPR1J1AC LCS Lot-Sample#: F8E300000-367
	99	(90 - 110) MCAWW 300.0A 05/29/08 8151367
		Dilution Factor: 1 Analysis Time: 06:34

(Continued on next page)

Dilution Factor: 1 Analysis Time..: 00:00

(90 - 110) MCAWW 300.0A

Dilution Factor: 1

Dilution Factor: 1

(90 - 110) MCAWW 300.0A

(90 - 110) SM18 2320 B

Work Order #: KPR1F1AC LCS Lot-Sample#: F8E300000-366

Work Order #: KPR1D1AC LCS Lot-Sample#: F8E300000-365

Work Order #: KN7RG1AC LCS Lot-Sample#: F8F020000-059

Analysis Time..: 06:34

Analysis Time..: 06:34

Nitrite

Sulfate

Total Alkalinity

100

91

100

Client Lot #...: F8E290268

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8E290268

Matrix..... WATER

PERCENT RECOVERY PREPARATION-PREP METHOD RECOVERY ANALYSIS DATE BATCH # PARAMETER LIMITS____ Work Order #: KPC5L1AC LCS Lot-Sample#: F8F040000-338 Total Dissolved Solids 100 (86 - 115) MCAWW 160.1 06/04-06/05/08 8156338

Dilution Factor: 1 Analysis Time..: 00:00

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot # Date Sampled		0268 708 11:35 Date Receive d	: 05/28/08	Matrix WATER
PARAMETER	PERCENT RECOVERY	RECOVERY RPD LIMITS RPD LIMITS	METHOD	PREPARATION- WORK ANALYSIS DATE ORDER #
MS Lot-Sampl	e #: F8E28	0143-001 Prep Batch #.	: 8155134	
Calcium	0 N	(75 - 125)	SW846 6020	06/11-06/24/08 KNX8D1A0
	136 N	(75 - 125) 0.0 (0-20) Dilution Factor: 1000 Analysis Time: 15:5		06/11-06/24/08 KNX8D1A1
Iron	62 N	(75 - 125)	SW846 6020	06/11-06/17/08 KNX8D1A2
	68 N	(75 - 125) 6.1 (0-20)	= :	06/11-06/17/08 KNX8D1A3
		Dilution Factor: 2 Analysis Time: 02:1		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Magnesium	358 N	(75 - 125)	SW846 6020	06/11-06/21/08 KNX8D1A6
_	0 И	(75 - 125) 0.0 (0-20)	SW846 6020	06/11-06/21/08 KNX8D1A7
		Dilution Factor: 1000 Analysis Time: 22:1		
Manganese	79	(75 - 125)	SW846 6020	06/11-06/17/08 KNX8D1A8
J	83	(75 - 125) 4.5 (0-20) Dilution Factor: 2 Analysis Time: 02:1		06/11-06/17/08 KNX8D1A9
Potassium	122 N	(75 - 125)	SW846 6020	06/11-06/21/08 KNX8D1A4
TOCASSIAN	0 N	(75 - 125) 0.0 (0-20)		06/11-06/21/08 KNX8D1A5
		Dilution Factor: 1000 Analysis Time: 22:1		,,,,,,
Silicon	182 N	(75 - 125)	SW846 6020	06/11-06/21/08 KNX8D1CD
	138 N,*	(75 - 125) 27 (0-20)	SW846 6020	06/11-06/21/08 KNX8D1CE
		Dilution Factor: 1000 Analysis Time: 22:1		
Sodium	3360 N	(75 - 125)	SW846 6020	06/11-06/21/08 KNX8D1CA
•	0 N	(75 - 125) 0.0 (0-20)	SW846 6020	06/11-06/21/08 KNX8D1CC
		Dilution Factor: 1000 Analysis Time: 22:1		

NOTE (S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

^{*} Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F8E290268 Matrix.....: WATER

Date Sampled...: 05/28/08 11:00 Date Received..: 05/29/08

PARAMETER Bromide	PERCENT RECOVERY 90	RECOVERY PREPARATION - PREP LIMITS METHOD ANALYSIS DATE BATCH # Work Order #: KN3HJ1A1 MS Lot-Sample #: F8E290268-001 (90 - 110) MCAWW 300.0A 05/30/08 8151362 Dilution Factor: 200 Analysis Time: 12:27
Chloride	98	Work Order #: KN3HJ1A3 MS Lot-Sample #: F8E290268-001 (90 - 110) MCAWW 300.0A 05/30/08 8151363 Dilution Factor: 10000 Analysis Time: 12:51
Fluoride	95	Work Order #: KN3HJlA5 MS Lot-Sample #: F8E290268-001 (90 - 110) MCAWW 300.0A 05/30/08 8151364 Dilution Factor: 200 Analysis Time: 12:27
Nitrate	99	Work Order #: KN3HJ1CC MS Lot-Sample #: F8E290268-001 (90 - 110) MCAWW 300.0A 05/30/08 8151367 Dilution Factor: 10 Analysis Time: 12:14
Nitrite	120 N	Work Order #: KN3HJ1A9 MS Lot-Sample #: F8E290268-001 (90 - 110) MCAWW 300.0A 05/30/08 8151366 Dilution Factor: 10000 Analysis Time: 12:51
Nitrogen, as Am	monia 104	Work Order #: KNW831AP MS Lot-Sample #: F8E270173-001 (90 - 110) MCAWW 350.1 05/30/08 8150453 Dilution Factor: 1 Analysis Time: 00:00
Sulfate	78 N	Work Order #: KN3HJ1A7 MS Lot-Sample #: F8E290268-001 (90 - 110) MCAWW 300.0A 05/30/08 8151365 Dilution Factor: 200 Analysis Time: 12:27
Total Alkalinit	У 90	Work Order #: KN5J21A2 MS Lot-Sample #: F8E300223-003 (80 - 120) SM18 2320 B 06/02/08 8154059 Dilution Factor: 1 Analysis Time: 00:00

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

General Chemistry

Client Lot #...: F8E290268

Work Order #...: KNW83-SMP

Matrix....: WATER

KNW83-DUP

Date Sampled...: 05/22/08 09:19 Date Received..: 05/24/08

PARAM RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrogen, as Ammo	onia			_	SD Lot-Sample #:	F8E270173-001	
120	140 B	ug/L	19	(0-20)	MCAWW 350.1	05/30/08	8150453
		Dilution Fact	or: 1	Ana	lysis Time: 00:00		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

General Chemistry

Client Lot #...: F8E290268

Work Order #...: KN3JD-SMP

Matrix....: WATER

KN3JD-DUP

Date Sampled...: 05/28/08 13:25 Date Received..: 05/29/08

PARAM RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH (liquid)					SD Lot-Sample #:	F8E290268-002	
7.3	7.3	No Units	0.14	(0-0.0)	SW846 9040	05/29/08	8151296
		Dilution Fact	or: 1	Āna	lvsis Time: 00:00		

General Chemistry

Client Lot #...: F8E290268 Work Order #...: KN3HJ-SMP Matrix.....: WATER

KN3HJ-DUP

Date Sampled...: 05/28/08 11:00 Date Received..: 05/29/08

	DUPLICATE			RPD		PREPARATION-	PREP
PARAM RESUL'	result	UNITS	RPD_	LIMIT	METHOD	ANALYSIS DATE	BATCH #
Bromide					SD Lot-Sample #:	F8E290268-001	
60.1	62.5	mg/L	3.9	(0-20)	MCAWW 300.0A	05/30/08	8151362
		Dilution F	actor: 200	Ana	alysis Time: 12:27		
Chloride					SD Lot-Sample #:	F8E290268-001	
29900	29700	mg/L	0.65	(0-20)	MCAWW 300.0A	05/30/08	8151363
					alysis Time: 12:51		
Fluoride					SD Lot-Sample #:	F8F290268-001	
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A		8151364
ND	ND	Dilution F			alysis Time: 12:27	03/30/08	0131364
•		Dilution F	actor: 200	Alk	alysis Time: 12:2/		
Sulfate					SD Lot-Sample #:	F8E290268-001	
3860	3860	mg/L	0.013	(0-20)	MCAWW 300.0A	05/30/08	8151365
		Dilution F	actor: 200	Ana	alysis Time: 12:27		
Nitrite					SD Lot-Sample #:	F8E290268-001	
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	05/30/08	8151366
ND					alysis Time: 12:51	00,00,00	
					CD Tab Camala II	T07000000 001	
Nitrate	•	4			SD Lot-Sample #:		
ND	ND	mg/L	0	(0-20)	MCAWW 300.0A	05/30/08	8151367
		Dilution F	actor: 10	Ana	alysis Time: 12:14		

General Chemistry

Client Lot #...: F8E290268

Work Order #...: KN2LJ-SMP

Matrix....: WATER

KN2LJ-DUP

Date Sampled...: 05/27/08 09:00 Date Received..: 05/28/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E290176-002	PREP BATCH #
71.0	73.0	mg/L Dilution Fact	2.8 cor: 1	(0-15) Ana	MCAWW 310.1 lysis Time: 00:00	06/02/08	8154062
Carbonate Alkalin	ity ND	mg/L Dilution Fact	0 :or: 1	(0-20) Ana	SD Lot-Sample #: MCAWW 310.1 lysis Time: 00:00	F8E290176-002 06/02/08	8154061

General Chemistry

Client Lot #...: F8E290268

Work Order #...: KN2LW-SMP

Matrix..... WATER

KNZTM-DOB

Date Sampled...: 05/27/08 09:35 Date Received..: 05/28/08

PARAM RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE	PREP BATCH #
					an noc-sampre #:	FOEZ301/0-003	
Alkalinity							
55.0	52.0	mg/L	5.6	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00		
Carbonate Alkalin	nity				SD Lot-Sample #:	F8E290176-003	
ND	ND	mq/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fac	tor: 1	Ana	alysis Time: 00:00		

General Chemistry

Client Lot #...: F8E290268 Work Order #...: KN2NJ-SMP Matrix.....: WATER

KN2NJ-DUP

Date Sampled...: 05/28/08 08:10 Date Received..: 05/29/08

PARAM RESULT Bicarbonate	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E290185-001	PREP BATCH #
Alkalinity	E0 0	m~ /T	2 0	/O 1E)	MC25tra 210 1	0.0 / 0.0 / 0.0	0154060
51.0	50.0	mg/L	2.0	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fac	ctor: 1	Ana	lysis Time: 00:00		
Carbonate Alkalin	ity				SD Lot-Sample #:	F8E290185-001	
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00		
pH (liquid)					SD Lot-Sample #:	F8E290185-001	
7.6	7.6	No Units	0.53	(0-0.0)	SW846 9040	05/29/08	8151296
		Dilution Fac	tor: 1	Ana	lysis Time: 00:00		

General Chemistry

Client Lot #...: F8E290268 Work On

Work Order #...: KN46M-SMP

Matrix....: WATER

KN46M-DUP

Date Sampled...: 05/29/08 09:45 Date Received..: 05/30/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E300179-001	PREP BATCH #
76.0	78.0	mg/L Dilution F	2.6 Factor: 1	(0-15) Ana	MCAWW 310.1	06/02/08	8154062
Carbonate Alkalin	ity				SD Lot-Sample #:	F8E300179-001	
ND	ND	mg/L Dilution F	0 actor: 1	(0-20) Ana	MCAWW 310.1 alysis Time: 00:00	06/02/08	8154061

General Chemistry

Client Lot #...: F8E290268 Work Order #...: KN5J2-SMP

Matrix....: WATER

KN5J2-DUP

Date Sampled...: 05/29/08 16:10 Date Received..: 05/30/08

PARAM RESULT Bicarbonate Alkalinity	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E300223-003	PREP BATCH #
9.4	9.3	mg/L	1.6	(0-15)	MCAWW 310.1	06/02/08	8154062
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		
Carbonate Alka	alinity				SD Lot-Sample #:	F8E300223-003	•
ND	ND	mg/L	0	(0-20)	MCAWW 310.1	06/02/08	8154061
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		
Total Alkalini	ty				SD Lot-Sample #:	F8E300223-003	
189	279	mg/L	38	(0-20)	SM18 2320 B	06/02/08	8154059
		Dilution Fa	ctor: 1	Ana	alysis Time: 00:00		

General Chemistry

Client Lot #...: F8E290268 Work Order #...: KN6XH-SMP Matrix.....: WATER

KN6XH-DUP

Date Sampled...: 05/30/08 09:45 Date Received..: 05/31/08

PARAM RESULT Bicarbonate	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E310160-003	PREP BATCH #
Alkalinity 121	120	mg/L Dilution Fa	0.83	(0-15) Ana	MCAWW 310.1	06/02/08	8154062
Carbonate Alkalin	ity ND	mg/L Dilution Fa	0 ctor: 1	(0-20) Ana	SD Lot-Sample #: MCAWW 310.1 clysis Time: 00:00	F8E310160-003 06/02/08	8154061

General Chemistry

Client Lot #...: F8E290268 Work Order #...: KN5GT-SMP Matrix.....: WATER

KN5GT-DUP

Date Sampled...: 05/28/08 10:02 Date Received..: 05/30/08

PARAM RESULT Total Dissolved	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E300212-001	PREP BATCH #
Solids	420	mg/L	2.6	(0-15)	MCAWW 160.1	06/04-06/05/08	0156330
431	420	Dilution Fa			alvsis Time: 00:00	06/04-06/05/08	9126338

General Chemistry

Client Lot #...: F8E290268 Work

Work Order #...: KN5RL-SMP

KN5RL-DUP

Matrix....: WATER

Date Sampled...: 05/28/08 10:17 Date Received..: 05/30/08

PARAM RESULT Total Dissolved	DUPLICATE RESULT	UNITS	RPD_	RPD LIMIT	METHOD SD Lot-Sample #:	PREPARATION- ANALYSIS DATE F8E300262-001	PREP BATCH #
Solids 1690	1870	mg/L	9.9	(0-15)	MCAWW 160.1	06/04-06/05/08	8156338

F8E290268

CLIENT ANALYSIS SUMMARY

SDG:

Storage Loc:

1-90,METS

Project Manager: IV

Quote #: 79192

Date Received:

2008-05-29

Project:

6468071950

FPL Turkey Point CQL

Analytical Due Date:

2008-06-19

PO#:

200807151

Report to: Al Tice

Report Due Date:

2008-06-19

Client:

63036

MACTEC Engineering & Consulting Inc

#SMPS in LOT: 4

Report Type: W

EDD Code: 00

Inform PM of any receiving issues.

SAMPLE#	CLIENT SAMPL	<u>E1D</u>	Site ID	Client Matrix	DATE/TI	ME SAMPLED	WORKOR	DER	<u>1</u>	
1	OW-721U				2008-05-2	28 / 1100	КМЗНЈ	W	/ATER	
SAMPLE C	OMMENTS:									
FE MH	SW846 5020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	7
KX MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	• •
·· MG MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	. 01	STANDARD TEST SET	PROT: A	WRK	06	
MN MH	SW845 5020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
NA MH	SW846 5020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
SA MH	SW846 5020	WATER, Silica by calculation	0X	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG: STANDARD	PROT: A	WRK	06	
SI MH	SW846 6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	. 01	STANDARD TEST SET	PROT: A	WRK	06	
CA MH	SW846 5020	WATER, 6020, Metals	ಡ್ರ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
·XX AK	MCAW 160.1	WATER, 150.1, Solida, Filterable "TDS"	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX C8	MCAW 300,0A	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX C9	MCAW 300,0A -	WATER, 300.0A, Nitrate as	88	NO SAMPLE PREPARATION . PERFORMED / DIRECT	01	STANDARD TEST SET	···: PROT: A .	WRK	06	
XX CB	MCAW 310.1 W	WATER, 310.1, Alkelinity, Carbonate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	. 01	STANDARD TEST SET	PROT: A	WRK	.06	
XX CX	MCAW 300.0A	WATER, 300,0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	•
XX CY	MCAW, 300.0A	WATER, 300,0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
· TXX FJ	SW846 9040	WATER, 9040C, pH	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	∵06	
XX GM	MCAW 300.0A W	WATER, 300,QA, Bromide	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	. 01	STANDARD TEST SET	PROT: A	WRK	06	
XX GO	MCAW 300,QA	WATER, 300.0A, Nitrite as	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX LV	SM18 2320 B	WATER, 2320 B, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX SL	SM18 1030F & API	WATER, 1030F & API, Ion Balance	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06	•
XX UX	MCAW 310.1	WATER, 318.1, Alkalinity, Bicarbonate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	7,
············XX · VM	MCAW 350.1 W	WATER, 350,1, Nitrogen, Ammonia	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	_06.	
SAMPLE#	CLIENT SAMPL	EID S	Site ID	Client Matrix	DATE/TI	ME SAMPLED	WORKOR	DER	1	
				1					_	
2	OW-721L				2008-05-2	207 1325	KN3JD	V	/ATER	
SAMPLE C	OMMENTS: SW846 6020	WATER, 6020,	GJ	METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	WRK	06	
SI MH	SW845 6020	Metals WATER, 6020,	GJ	HCL METALS, TOTAL - 2%.	01	STANDARD TEST SET	PROT: A	LOC	06	
SA MH	SW846 6020	Metals WATER, Silica by	OΧ	HCL CALCULATION	90	ORG FLAGS FOR INORG;	PROT: A	LOC	06	
NA MH	SW846 6020	calculation WATER, 6020	GJ	ONLY METALS, TOTAL - 2%	01	STANDARD STANDARD TEST SET	PROT: A	LOC	06	
KX MH	SW846 6020	Metals WATER, 6020,	GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC	06	
FE MH	SW846 6020	Metals WATER, 6020,	GJ	HCL METALS, TOTAL - 2%	. 01	STANDARD TEST SET	PROT: A	LOC	06	
CA MH	SW846 6020	Metals WATER, 8020,	GJ	HCL METALS, TOTAL - 2%	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
MG MH	SW846 6020	Metals WATER, 6020,	en.	HCL METALS, TOTAL - 2%	. 01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX AK	MCAW 160.1	Metals WATER, 160.1, Solids,	88	HCL NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
XX C8	W MCAW 300.0A	Filterable "TDS" WATER, 300.0A,	88	PERFORMED / DIRECT NO SAMPLE PREPARATION	01	STANDARD TEST SET	PROT: A	LOC WRK	06	
To all marian	W Skilovin Logo	Fluoride	NA 2000	PERFORMED / DIRECT		inted any Thursday Man	20 2000 02:57 D	LOC		Dogo 1 of 2

TestAmerica - St. Louis

Page 1 of 3

BRUNSONA

2008-05-29

Logged in by:

14:54:12

printed on: Thursday, May 29, 2008 03:57 PM

CLIENT ANALYSIS SUMMARY F8E290268 Storage Loc: 1-90,METS Date Received: 2008-05-29 Quote #: 79192 SDG: Project Manager: IV Analytical Due Date: 2008-06-19 FPL Turkey Point COL 6468071950 Project: Report Due Date: 2008-06-19 200807151 Report to: Al Tice PO#: Report Type: W 63036 MACTEC Engineering & Consulting Inc Client: #SMPS in LOT: 4 EDD Code: Inform PM of any receiving issues. WATER, 300.0A, Nitrale as NO SAMPLE PREPARATION STANDARD TEST SET MCAW 300.0A 88 01 PROT: A WRK 06 XX C9 PERFORMED / DIRECT NO SAMPLE PREPARATION WATER, 310.1, Aikelinity, STANDARD TEST SET MCAW 310.1 88 01 PROT: A WRK 06 XX CB Carbonate PERFORMED / DIRECT NO SAMPLE PREPARATION WATER, 300.0A STANDARD TEST SET XX CX MCAW 300.0A 88 01 PROT: A WRK 06 PERFORMED / DIRECT NO SAMPLE PREPARATION WATER, 300.0A. STANDARD TEST SET MCAW 300.0A 88 01 PROT: A WRK 06 XX CY Stalfate PERFORMED / DIRECT SW846 9040 WATER, 9040C NO SAMPLE PREPARATION STANDARD TEST SET 88 01 PROT: A WRK XX FJ 06 PERFORMED / DIRECT WATER, 300.0A, NO SAMPLE PREPARATION STANDARD TEST SET XX GM MCAW 300.0A PROT: A WRK PERFORMED / DIRECT WATER, 300.0A, Nitrite as NO SAMPLE PREPARATION MCAW 300,0A 88 STANDARD TEST SET PROT: A WRK 06 XX GO 01 PERFORMED / DIRECT NO SAMPLE PREPARATION WATER, 2320 B. Alkalinity. STANDARD TEST SET SM18 2320 01 PROT: A WRK 06 PERFORMED / DIRECT CALCULATION 1030F & WATER, 1030F & API, lon XX SL SM18 0X 01 STANDARD TEST SET PROT: A WRK 06 ONLA NO SAMPLE PREPARATION WATER, 310.1, Alkalinity, STANDARD TEST SET XX UX MCAW 310.1 88 01 PROT: A WRK 06 PERFORMED / DIRECT MCAW 350.1 W WATER, 350.1, Nitrogen, NO SAMPLE PREPARATION STANDARD TEST SET 88 01 PROT: A WRK XX VM 06 PERFORMED / DIRECT SAMPLE # CLIENT SAMPLE ID Site ID DATE/TIME SAMPLED WORKORDER Client Matrix 1 2008-05-28 / 1610 **KN3JR** WATER OW-606U SAMPLE COMMENTS: METALS, TOTAL - 2% SW846 6020 WATER, 6020. STANDARD TEST SET PROT: A WRK FE MH 06 KX MH METALS, TOTAL - 2% STANDARD TEST SET SW846 6020 WATER, 6020. GJ 01 PROT: A WRK 06 HCI LOC STANDARD TEST SET MG MH WATER, 6020, PROT: A SW846 6020 METALS, TOTAL - 2% 01 WRK 06 LOC MN MH SW846 6020 WATER, 6020, GJ METALS, TOTAL - 2% 01 STANDARD TEST SET PROT: A WRK .06... SW846 6020 STANDARD TEST SET WATER, 6020. METALS, TOTAL - 2% PROT: A WRK NA MH 01 WATER, Silica by MH SW845 6020 CALCULATION ORG FLAGS FOR INORG: PROT: A WRK SA ONLY METALS, TOTAL - 2% SW846 6020 WATER, 6020 STANDARD TEST SET PROT: A WRK SI MH SW846 6020 WATER, 6020 METALS, TOTAL - 2% STANDARD TEST SET PROT: A WRK CA MH ĢJ 01 06 NO SAMPLE PREPARATION XX AK MCAW 160.1 WATER, 160.1, Solids STANDARD TEST SET PROT: A WRK 06 Fillerable PERFORMED / DIRECT WATER, 300.0A, Fluctide NO SAMPLE PREPARATION PERFORMED / DIRECT MCAW 300.0A STANDARD TEST SET_1 PROT: A WRK XX C8 88 06 NO SAMPLE PREPARATION MCAW 300.0A WATER, 300.0A, Nitrate as STANDARD TEST SET PROT: A WRK XX C9 PERFORMED / DIRECT XX CB MCAW 310.1 WATER, 310,1, Alkalinky, 88 NO SAMPLE PREPARATION 01 STANDARD TEST SET PROT: A WRK 06 PERFORMED / DIRECT Carbonate MCAW 300.0A WATER, 300.DA, NO SAMPLE PREPARATION STANDARD TEST SET PROT: A WRK XX CX PERFORMED / DIRECT XX CY MCAW 30D.OA WATER, 300.0A, 88 NO SAMPLE PREPARATION 01 STANDARD TEST SET PROT: A WRK 06 PERFORMED / DIRECT Sulfate NO SAMPLE PREPARATION SW846 9040 WATER, 9040C, 88 01 STANDARD TEST SET PROT: A WRK 06 XX FJ PERFORMED / DIRECT LOC MCAW 300.0A WATER, 300.0A, NO SAMPLE PREPARATION STANDARD TEST SET PROT: A WRK 88 01 90 XX GM PERFORMED / DIRECT Bromide MCAW 300.0A WATER, 300.0A, Nitrite as NO SAMPLE PREPARATION STANDARD TEST SET PROT: A WRK 06 XX GO PERFORMED / DIRECT NO SAMPLE PREPARATION PERFORMED / DIRECT SM18 2320 WATER, 2320 B, Alkalinity, 88 01 STANDARD TEST SET PROT: A WRK 06 XX LV WATER, 1030F & API, ion CALCULATION 1030F & STANDARD TEST SET PROT: A WRK XX SL 0X 06 MCAW 310,1 WATER, 310.1, Alkalinly, NO SAMPLE PREPARATION STANDARD TEST SET PROT: A WRK XX UX 88 06 Bicarbonale MCAW 350.1 W XX VM WATER, 350.1, Nitrogen, NO SAMPLE PREPARATION STANDARD TEST SET PROT: A WRX 06 PERFORMED / DIRECT WORKORDER SAMPLE # CLIENT SAMPLE ID Site ID Client Matrix DATE/TIME SAMPLED TestAmerica - St. Louis Logged in by: BRUNSONA 2008-05-29 14:54:12 printed on: Thursday, May 29, 2008 03:57 PM Page 2 of 3 F8E290268

CLIENT ANALYSIS SUMMARY

SDG:

Storage Loc:

1-90,METS

Project Manager: IV

Quote #: 79192

Date Received:

2008-05-29

Project:

6468071950

FPL Turkey Point COL

Analytical Due Date:

2008-06-19

PO#:

200807151

Report to: Al Tice

Report Due Date:

2008-06-19

Client:

63036

MACTEC Engineering & Consulting Inc

#SMPS in LOT: 4

Report Type: W

EDD Code: 00

Inform PM of any receiving issues.

4		OW-60	D6L				2008-05-2	28 / 1540	KN3JT	- W	ATER	
SAMP	LE C	OMME	VTS:									
MN	MH	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
Si	МН	SW846	5020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
SA	MH	SW845	6020	WATER, Silica by calculation	OΧ	CALCULATION ONLY	9Q	ORG FLAGS FOR INORG; STANDARD	PROT: A	WRK	06	,
NA	MH	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
KX	MH	SW846	6020	WATER, 6020, Metels	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
CA	MH	SW846	6020	WATER, 6020. Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
FE	MH	SW846	6020	WATER, 6020. Metals	GJ	METALS, TOTAL - 2% HCL	01	STANDARD TEST SET	PROT: A	WRK	06	
MG	MH	SW846	6020	WATER, 6020, Metals	GJ	METALS, TOTAL - 2% HCL	. 01	STANDARD TEST SET	PROT: A	WRK	06	
XX	AK	MCAW W	160.1	WATER, 160.1, Solids, Filterable "TD5"	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	C8	MCAW W	300.0A	WATER, 300.0A, Fluoride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	C9	MCAW W	300.0A	WATER, 300.0A, Nitrate as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	CB	MCAW W	310.1	WATER, 310.1, Alkalinity, Carbonate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	0 6	
XX	CX	MCAW W	A0,006	WATER, 300.0A, Chloride	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	CY	MCAW W	300.0A	WATER, 300,0A, Sulfate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06 -	
XX	FJ	SW846	9040	WATER, 9040C, pH	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	: 06	
XX	GM	MCAW W	300.0A	WATER, 300.0A. Bromide	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	.01	STANDARD TEST SET	PROT:-A	WRK:	06	: '
XX	GO	MCAW W	300.0A	WATER, 300,0A, Nitrite as N	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A		06	aNe.
XX	LV	SM1B	2320 B	WATER, 2320 B, Alkalinity, Total	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	SL	SM18	1030F & APi	WATER, 1030F & API, Ion Balance	0X	CALCULATION ONLY	01	STANDARD TEST SET	PROT: A	WRK	06	
XX	UX	MCAW W	310.1	WATER, 310.1, Alkalinity, Bicarbonate	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	;
XX	٧M	MCAW	350.1	WATER, 350.1, Nitrogen, Ammonia	88	NO SAMPLE PREPARATION PERFORMED / DIRECT	01	STANDARD TEST SET	PROT: A	WRK	06	į

	+ p + 55	•					
	Ch.	Temperature on Receipt	on Receipt -		FestA	FestAmerica	
Custody Record	te 8	Drinking Water? Yes □ NoX	ır? Yes□	Non	THE LEADER IN E	THE LEADER IN ENVIRONMENTAL TESTING	
TAL-4124 (1007) Glient MACTEC		Project Manager	Scott	Scot AsseR		Date 05-28-08	Chain of Custody Number 062463
Address Adjustic Aronne	9	Telephone Number (Area Gode)/Fax Num	PT(sea Code)/	e)/Fax Number 0416	c '	Lab Number	Page / of
State	Zip Code	Sile Contact	7	Lab Contact	Ħa)	Analysis (Attach list if more space is needed)	
ocalion (State)	1	Carrier/Waybill Number	1		FORTH CONTRACTOR		Special Instructions/
Contract/Purchase Orden/Quole No.			Matrix	Containers & Preservatives			Conditions of Receipt
Sample I.D. No. and Description	Date	Time suceuph	lios pas	HOBN HOS HVSSCH TSSUGU	TAN SUNT TOWN	\(\frac{\gamma}{2}\)	CAtions, calcium
7124-m0	05/26/69	+		رد -	112	34 252 P	MPN JON 22
J127-00	80/82/50	1328 X	2 2-4 1 200 1 24 2 24	21	1 2		Souline 15:110g
July- 606 U	80/80/50	X 0191	i igi Arre Selis	7	- 2		04-594 SWB46 9045(b)
7909-ma	05/26/cs	1540 1		7	~ ~	2	1,001 AB-SOT
	×				-	,	Cating-CA 2007 Say
			7 7				Tong NEAMU - 200 A
			31.11				Alkalind -50x 310.1
							Animarian 204 350,1
	n".		udite Kanto Light	-			retried - ept 353.1
	\$41 F		: :				_ 1
	-		 				CATINO EDA LOOZOC
Possible Hazard Idenlification Non-Hazard Flammable Skin Inflant	□ Polson B	Samp Vinknown Ri	Sample Disposal :	M. Disposal By Lab	b Archive For	(A fee may be of the Months Ionger than 1 m	(A fee may be assessed if samples are retained longer than 1 month)
ie Required 7 Days	14 Days 21 Days	ys 1000 Starbord	ordered	QC Requirements (Specify)	(Specify)		
M. L. List		05/26/08	1630	1. Referred By	Media		125.29.18 09.00
	18.77 TV 1	Date	Time	2. Received By			
3. Reilnquished By		Date	Time	3. Received By	- 		Date Time
Comments CAHOO + PAGAL HOLD A	100	masterde - Mary charge	Shringe to	Loston 19	Approved OF	1541-18-08	Watt for Instruction
DISTRIBUTION WHITE Believed to Client with Beach	or CANARY Stave with the	with the Sample: PINK	4	т.	111111111111111111111111111111111111111		

	IE LEADER IN ENVIRONM	MENTAL TESTING		
		/	Condition Upon Recei	int Form
	ient: <u>Ma</u>	COC/RFA No: De Initiated By:	52463 Z	Date: <u>05-29.08</u>
Qı	note No: 79			Time:
Sh	ipper Name:	Fed X	pping Information	Multiple Packages Y (N)
	ipping # (s):*	2820 826CO 6.		Sample Temperature (s):** 1.
1. 2.	<u> </u>	7		
3.		8. 9.		3. 8.
4. 5.		9. 10. ·	<u> </u>	5. 9.
*N1	umbered shipping line	es correspond to Numbered Sample Temp lines	**Sample must be rece variance does NOT aff	cived at 4°C±2°C- If not, note contents below. Temperature ect the following: Metals-Liquid or Rad tests- Liquid or So
Co	ndition (Circle "Y	for yes, 'N" for no and 'N/A" for not applicable)		1
1.	M (Å)	Are there custody seals present on the cooler?	8. Y N /	Are there custody seals present on bottles?
2.	Y (N) N/A	ne ramberen wint.	9. Y N (N/A	Do custody seals on bottles appear to be tamp with?
3.	Ø и	Were contents of cooler frisked after opening, but before unpacking?	10. Y N N/A	Was sample received with proper pH¹? (If not make note below)
4.	Y N	Sample received with Chain of Custody?	11. Y N	If N/A-Was pH taken by original TestAmeri lab?
5.	Y N N/A	Does the Chain of Custody match sample ID's on the container(s)?	12. Y N	Sample received in proper containers?
6.	YN	Was sample received broken?	13. Y N NA	Headspace in VOA or TOX liquid samples? Yes, note sample ID's below)
7.	(X, N	Is sample volume sufficient for analysis?	14. Y N	Was Internal COC/Workshare received?
F		LANL, Sandia) sites, pH of ALL containers receive	ed must be verified, EXCEP	T VOA, TOX and soils.
	otes	The state of LOS In High the		and the second section of the section of the second section of the section of the second section of the second section of the sectio
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			2).	<u> </u>
			Y)	<u> </u>
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			?;	<u> </u>
				<u> </u>
				<u> </u>
	orrective Action:			<u> </u>
	orrective Action: Client Contact	Name:	Informed by:	<u> </u>

LOT# F8E290268

Slug Test Data Forms

Appendix G Summary Table of Input Values for Hydraulic Conductivity Test Analyses Turkey Point COL Project MACTEC Project No. 6468-07-1950

WELL ID	Background	Test Date Falling Head	Rising Head	Test Method	Borehole Depth (ft bgs¹)	Static H2O (ft TOC²)	Riser (ft ags)	Static H2O (ft bgs)	Water Column Height (feet)	Formation Depth	Borehole Length vs Formation Extent	Saturated Thickness ³ (feet, bgs)	Maximum Di (lec	et) Rising	Top of Well Screen ⁴ (feet bgs)	Well Screen Length ⁴ (feet)	Radius of Well Casing (feet)		Radius of Probe (feet)	Probe Serial Number	Notes
	5/20/2008		5/20/2008	pneumatic	30.17	3,48	3.2	0.28	29.89	24.00	6.17	29.89	· · · · · · · · · · · · · · · · · · ·	2.792	15	15.17	0.083	0.30	0.03	118478	-
			5/20/2008	pneumatic	30.17	3.48	3.2	0.28	29.89	24.00	6.17	29.89		3.394			1	1		118478	Test 2
OW-606 L	5/18/2008	5/18/2008	5/18/2008	manual slug	109.00	3.24	2.8	0.44	108.56	116.00	-7.00	92	1.013	1.817	92.8	17.2	0.083	0.29	0.03	118478	
	5/20/2008		5/20/2008	pneumatic	109.00	3.07	2.8	0.27	108.73	116.00	-7.00	92		4.38B						118478	
OW-621 U	5/20/2008		5/20/2008	pneumatic	30.00	5.74	3,3	2.44	27.56	26.00	4.00	27.56		10,561	14.4	15.6	0.083	0.30	0.03	118478	
OW-621 L	5/17/2008	5/17/2008	5/17/2008	manual slug	110.00	4.13	3.0	1.13	108.87	114.50	-4.50	88.5	19.286	3.011	95	15	0.083	0.30	0.03	103345	
			5/17/2008	manual slug	110.00	4.13	3.0	1.13	108.87	114.50	-4.50	88.5	<u> </u>	2.103						103345	Test 2_
	5/20/2008		5/20/2008	pneumatic	110,00	4.71	3.0	1.71	108.29	114.50	-4.50	88.5	<u> </u>	12.053				L		118478	
OW-636 U	5/21/2008		5/21/2008	pneumatic	29,80	4.35	3.4	0.95	28.85	26.00	3.80	28.85		9.553	12.8	17	0.083	0.25	0.03	118478	
			5/21/2008	pneumatic	29.80	4.35	3.4	0.95	28.85	26.00	3.80	28.85		7.909	ļ					118478	
OW-636 L	5/21/2008		5/21/2008	pneumatic	111.00	2.74	3.4	-0.66	111.66	114.00	-3.00	88		8.321	93.5	17.5	0.083	0.25	0.03	118478	
			5/21/2008	pneumatic	111.00	2.74	3.4	-0.66	111.66	114.00	-3.00	88		5.913						118478	Test 2
OW-706 U		5/16/2008		manual slug	29.00	3.74	3.2	0.54	28.46	31.20	-2.20	30.66	0.941	0.96	13.4	15.6	0.083	0.25	0.03	103345	
	5/20/2008		5/20/2008	pneumatic	29.00	3.74	3.2	0.54	28.46	31.20	-2.20	30.66		4.189		45.4	0.000	0.05		118478	168(2
OW-706 L		5/16/2008		manual slug	112.00	1.50	3,2	-1.70	113.70	114.00	-2.00	82.8	1.19	2.693	96.9	15.1	0.083	0.25	0.03	103345	
OW-721 U			5/15/2008	manual slug	26.00	4.35	3.1	1.25	24.75	24.00	2.00	24.75	3,338	1.444	9.9	16,1	0.083	0.25	0.03	103345	
	5/20/2008		5/20/2008	pneumatic	26.00	4.73	3.1	1.63	24.37	24.00	2.00	24.37	0.454	10.884 5.904	<u> </u>		0.000	0.05	0.00	118478	
OW-721 L		5/15/2008		manual slug	109.00	2.17	3.2	-1.03 -1.23	110.03	114.00	-5.00	90 90	2.451	9,341	92	17	0.083	0.25	0.03	103345 118478	
AW 542 11	5/20/2008	el elenan	5/20/2008	pneumatic	109.00	1.97	3.2	1.55	26.45	114.00	-5.00	26.45	0.553	1.519	12	10	0.083	0.25	0.03	103345	
OW-735 U		5/15/2008		manual slug	28.00 28.00	4.85	3.3	1.65	26.45	26.00	2.00	26.35	0.353	10.051	112	16	0.083	U.25	0.03	118478	
OW-735L	5/20/2008 5/15/2008	5/15/2008	5/20/2008	pneumatic manual slug	110.00	4.95 2.97	3.3	-0.43	110.43	113.00	-3.00	20.35 87	3.004	5.779	92.3	17.7	0,083	0.25	0.03	103345	· · · · · · · · · · · · · · · · · · ·
OW-735L OW-802 U	5/15/2008		5/20/2008	pneumatic	27.00	4.60	3.4	1,20	25.80	27.00	0.00	25.80	3,004	7.799	10	17.7	0.083	0.25	0.03	118478	**
OW-802 L	5/20/2008		5/20/2008	pneumatic	110,00	3.06	3.3	-0.24	110.24	115,00	-5.00	25.80	 	12.796	93	17	0.083	0.23	0.03	118478	
OW-805 U	6/6/2008	6/6/2008		pneumatic	30.00	3.00	2.8	0.20	29.80	32.50	-2.50	32.30	1	3.886	13	17	0.083	0.25	0.03	118478	
OW-805 L	6/6/2008	6/6/2008	6/6/2008	pneumatic	97.00	3.19	3.7	-0.51	97.51	100.00	3.00	67.5	1	10.511	80	17	0.083	0.21	0.03	118478	
OW-809 U		5/15/2008		manual sluo	27.00	4,68	3.2	1.48	25.52	25.00	2.00	25.52	6.358	3.175	12.6	14.4	0.083	0.25	0.03	118478	
311 303 0		5/20/2008		pneumalic	27.00	4.72	3.2	1.52	25,48	25,00	2.00	25.48	1 5.500	11.016	1		5.000	1	1.00	118478	
OW-809 L		5/15/2008		manual stuo	110.00	3.26	3.3	-0.04	110.04	113.00	-3.00	88	11,287	2.64	91	19	0.083	0.25	0.03	103345	
OW-812 U	5/20/2008	LA 10/2000	5/20/2008	pneumatic	27.00	4.55	3,0	1.55	25.45	27,00	0.00	25.45	1	11.684	111	16	0.083	0.25	0.03	118478	
OW-812 L			5/20/2008		109.00	3,01	3.3	-0.29	109.29	113.00	-4.00	86	 	10.477	94	15	0.083	0.25	0.03	118478	
A4.015 F	JIZUIZUVO		31 2012 000	Pricuitatic	103.00	1	1 0.0	-0.23	103.20	110.00	1 4.00		<u></u>	10.417		<u> </u>	0.000	1 0,50	1 0.00	110710	

Anisotropy ratio (Kv/Kh) is assumed to be 1

Measured in feet below ground surface (bgs).

Measured in feet below the top of the well casing (TOC).

Saturated thickness values determined as:

1) water column height for all U wells that fully penetrate the Mlami Formation

2) Water column height blus the depth from the bottom of the borehole to the base of the Miami Formation for all U wells that do not fully penetrate the Miami Formation

3) Thickness of Thompson Formation for all L wells

Well screen dimensions based on direction from Bechtel to use borahole annulus

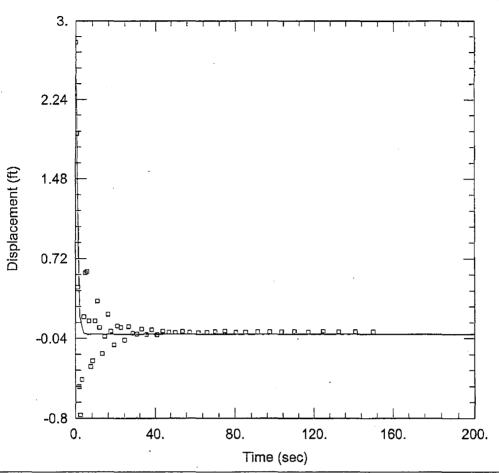
MACTEC Engineering and Consulting, Inc. Raleigh, NC

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#MACTEC

SLUG TEST REPORT

Project Name: TPCoL	04-66-0 Project Number:	77-1950 Page of	
client: Beahtel	Contractor: MACTEC		
Location: . OW - GOGU	MACTEC Rep: Kim Chads-	-Sm +6 Date: 05 2	<u>6010</u>
אואט			
Length	Feet		
Time	Minutes		·
Well Data		Find Sticker = 2:0	17 Frangs.
Static Water Level	3.48 feet From	toc	
Total Well Depth	31.91 feet Fram	-Toc	
Static Water Column Height (H)	feet		
	· Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	NA NA		
Saturated Thickness (b)	fest		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1	and the control of th	m
Depth to Top of Well Screen (d)			· · · · · · · · · · · · · · · · · · ·
Length of Well Screen (L)	10 feet		
Radius of Well Casing (rc)	0.083 feet .		
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)		* ************************************	
Radius of Boring (rsk) Skin Effect	0.083 feet	•	
	mini Toll Tonsoli	level Troll &	Ed 4/29/08 EXP4/21/09
Probe Serial Number	Sn:118478	level Troll @=	70
		winstu	:
Slug Data			
Length	USOD preumatic	- slug to per	storm lest,
weight		. 0	
Diameter			
Slug Test File	Background	Falling	Rising
File Name	0W-606UB/9	NA_	Law-Gooder !
Start Time	11:54:59	*	12:01:33
End Time	11.37.31		, 2.07, 7
Notes	000-606UR		
	12:06:45		
·	12:07:47	*****	
	T		
: ·			
· .			
iRev 0			



OW-606 U RISING HEAD 5/20/08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-606 U

Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 29.89 ft

WELL DATA (OW-606 U)

Initial Displacement: 2.792 ft

Static Water Column Height: 29.89 ft

Total Well Penetration Depth: 30.17 ft

Screen Length: 15.17 ft

Casing Radius: 0.083 ft

Well Radius: 0.3 ft

SOLUTION

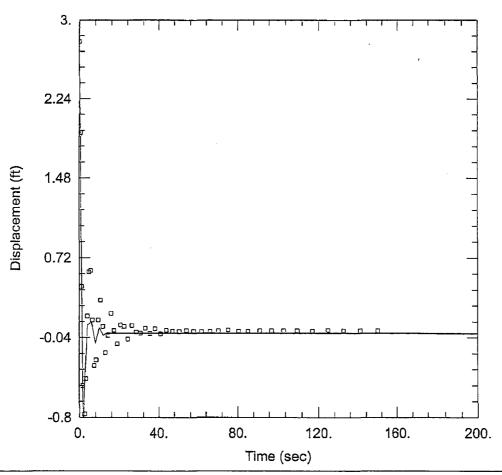
Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 97.98 ft/day

 $= 4.167E-12 ft^{-1}$

Kz/Kr = 1.



OW-606 U RISING HEAD 5/20/08

PROJECT INFORMATION

Company: Turkey Point

Client: BECHTEL

Project: 6468-07-1950 Location: Turkey Point Test Well: OW-606 U Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 29.89 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-606 U)

Initial Displacement: 2.792 ft

Static Water Column Height: 29.89 ft

Total Well Penetration Depth: 30.17 ft

Screen Length: 15.17 ft

Casing Radius: 0.083 ft

Well Radius: 0.3 ft

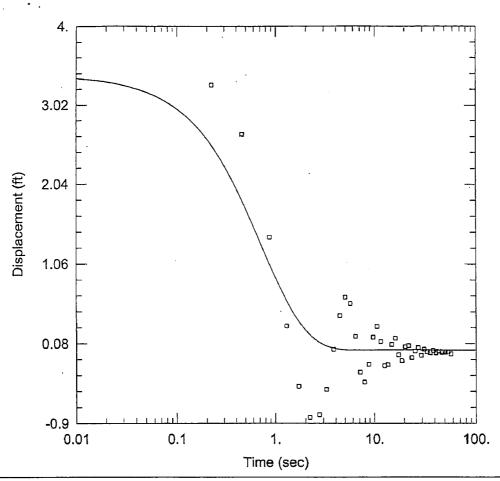
SOLUTION

Aquifer Model: Unconfined

Solution Method: Springer-Gelhar

K = 134.8 ft/day

Le = 17.69 ft



OW-606 U RISING HEAD 5/20/08 TEST 2

PROJECT INFORMATION

Company: Turkey Point

Client: BECHTEL Project: 6468-07-1950

Location: Turkey Point Test Well: OW-606 U Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 29.89 ft

WELL DATA (OW-606 U)

Initial Displacement: 3.394 ft

Total Well Penetration Depth: 30.17 ft

Casing Radius: 0.083 ft

Static Water Column Height: 29.89 ft

Screen Length: 15.17 ft

Well Radius: 0.3 ft

SOLUTION

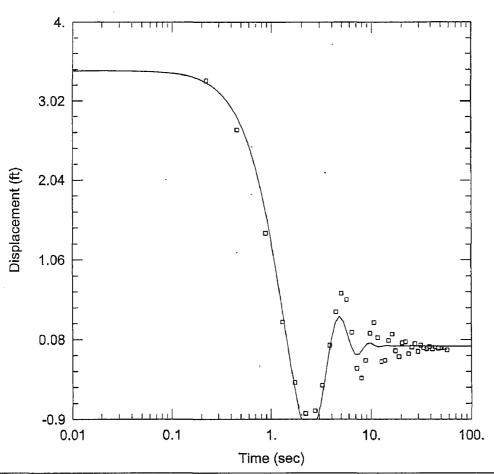
Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 92.02 ft/day

 $= 4.167E-12 \text{ ft}^{-1}$

Kz/Kr = 1.



OW-606 U RISING HEAD 5/20/08 TEST 2

PROJECT INFORMATION

Company: <u>Turkey Point</u> Client: <u>BECHTEL</u> Project: 6468-07-1950 Location: Turkey Point Test Well: OW-606 U Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 29.89 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-606 U)

Initial Displacement: 3.394 ft

Total Well Penetration Depth: 30.17 ft

Casing Radius: 0.083 ft

Static Water Column Height: 29.89 ft

Screen Length: 15.17 ft

Well Radius: 0.3 ft

SOLUTION

Aquifer Model: Unconfined

 $K = 123.1 \, \text{ft/day}$

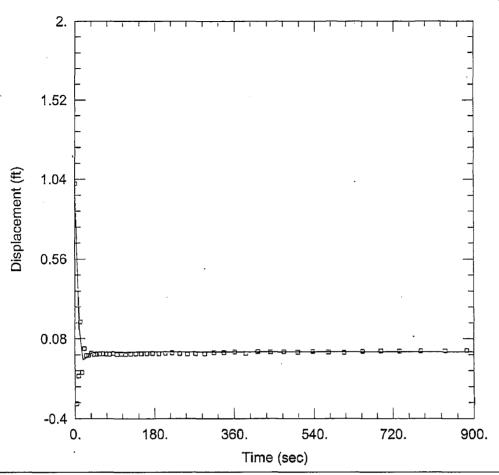
Solution Method: Springer-Gelhar

Le = 16.66 ft

MACTEC

SLUG TEST REPORT

Protect Name: TPCAL	Project Number:	ļ	age of	·	
Chent Blantill	Contractor: MACTEC				
Location: OW-606 L	MACTEC Rep: Kim Chals-S	in ild	Date: 05/18	2/ 0 8	
UNITS	Time yours	and a			
Length	Fest		•		
Time	Minutes				.* -
Well Deta	1	nd Stelep=	3.14!	done d'aveg.5	÷,
Static Water Level	3,24 test France	TOC		5-18-28	
Total Well Depth	111,31 me Franc	toc.	· ·		
Static Water Column Height (H)	108.27 feet		· ,		
	Background	Falling +	lead ·	Rising Head	į
Observed Initial Displacement (H ₀)	. NA	· · · · · · · · · · · · · · · · · · ·		<u> </u>	
Saturated Trickness (b)	feet	· · · · · · · · · · · · · · · · · · ·		Approximate a statement of some	
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1				
Depth to Top of Well Screen (d)		· ·			
Length of Well Screen (L)	10 test		- 	-	· .
Radius of Well Casing (rc)	0.088 feet		·		
Radius of Screen (rw)	0.083 feet				
Radius of Probe (reg)		· 		Province and the Company of the Comp	
Radius of Boring (rsk) Skin Effect	D.DB3 feet	· .		41 5 41	
	mini voll Trans	solver Ci	hawed.	4/20/08 849.4/29	109,
Probe Serial Number	:		·	· . `	.
3n1103345	*	•			
Slug Darta 5108#2	C	***			
Length	65.438 inche	<u> </u>			
weight	8.611 165.				
Diameter	I des who	<u>. </u>	· · · · · · · · · · · · · · · · · · ·	·	
Slog Test File	OW-GOGLBG	OW-COC.		Rising	
File Name Start Time	08:13:29	08:31:1	4	0W-606LR 08:48:16	٠
End Time	08:21:54	08:45:2	0:	09:06:04	-
Notes					=
	Extended to co	I-Casin	to_5,	16 above 9.5	
	to on lests	<u> </u>			
					.
					.]
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Rev D					



OW-606 L FALLING HEAD TEST 5-18-08

PROJECT INFORMATION

Company: <u>Turkey Point</u> Client: BECHTEL

Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-606 L
Test Date: 5-18-08

AQUIFER DATA

Saturated Thickness: 92. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-606 L)

Initial Displacement: 1.013 ft Static Water Column Height: 108.6 ft

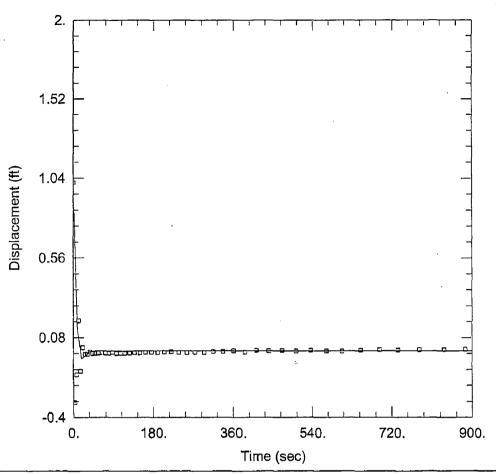
Total Well Penetration Depth: 109. ft Screen Length: 16.2 ft
Casing Radius: 0.083 ft Well Radius: 0.29 ft

Casing Radius: 0.083 ft Well Radius: 0.29 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 119.9 ft/day Le = 86.28 ft



OW-606 L FALLING HEAD TEST 5-18-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL

Project: 6468-07-1950 Location: Turkey Point Test Well: OW-606 L Test Date: 5-18-08

AQUIFER DATA

Saturated Thickness: 92. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-606 L)

Initial Displacement: 1.013 ft

Total Well Penetration Depth: 109. ft

Casing Radius: 0.083 ft

Static Water Column Height: 108.6 ft

Solution Method: McElwee-Zenner

Screen Length: 16.2 ft

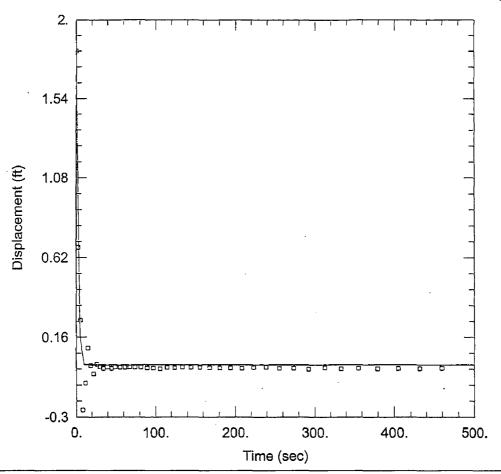
Well Radius: 0.29 ft

SOLUTION

Aquifer Model: Confined

Κ = 117.8 ft/day = -22.15 ft

Α = 0. $v(0) = \overline{0. \text{ ft/day}}$



OW-606 L RISING HEAD TEST 5-18-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: <u>6468</u>-07-1950 Location: Turkey Point Test Well: OW-606 L Test Date: 5-18-08

AQUIFER DATA

Saturated Thickness: 92. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-606 L)

Initial Displacement: 1.817 ft

Static Water Column Height: 108.6 ft

Total Well Penetration Depth: 109. ft

Screen Length: 16.2 ft

Well Radius: 0.29 ft

Casing Radius: 0.083 ft

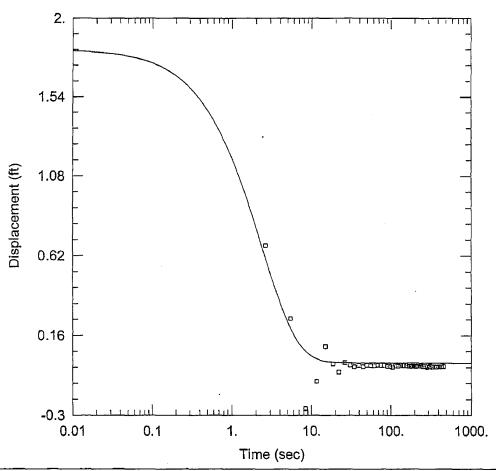
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 30.16 ft/day

Le = 58.94 ft



OW-606 L RISING HEAD TEST 5-18-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-606 L

Test Well: OW-606 L
Test Date: 5-18-08

AQUIFER DATA

Saturated Thickness: 92. ft

WELL DATA (OW-606 L)

Initial Displacement: 1.817 ft

Total Well Penetration Depth: 109. ft

Casing Radius: 0.083 ft

Static Water Column Height: 108.6 ft

Screen Length: 16.2 ft

Well Radius: 0.29 ft

SOLUTION

Aquifer Model: Confined

Kr = 35.04 ft/day

 $Kz/Kr = \overline{1.}$

Solution Method: KGS Model

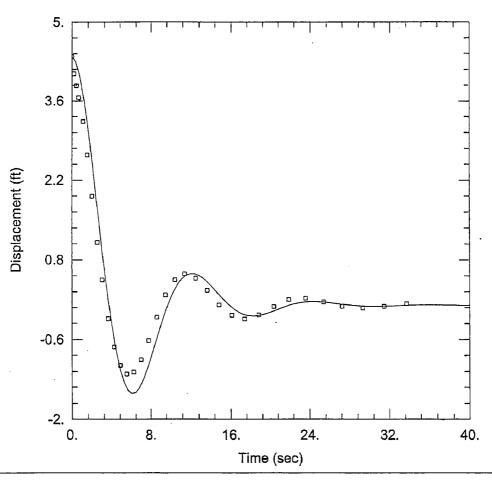
Ss = $1.087E-12 \text{ ft}^{-1}$

175

MACTEC

SLUG TEST REPORT

Project Name: TPCOL	Project Number:	-07-1950 Page 0	af \
client: Bechtul	Contractor: MACTEC		
Location: .OW -606L	MACTEC Rep: King Chall	Date: 057	20,08
UNITS	The Char	35 mill	
Length	Feat	·	
Time	Minutes		
Well Data		Find shokep =:	3.14
Static Water Level	3,07 feet	•	
Total Well Depth	111.31 feet		*
Static Water Column Height (H)	feet		
	Background	Falling Head	. Rising Head
Observed Initial Displacement (Ho)	NA .		
Saturated Thickness (b)	feet		· I pullination I makedou tompo .
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1	MANUFO ESSAGE MANUFORM OF S 14 S. C.	· · · · · · · · · · · · · · · · · · ·
Depth to Top of Well Screen (d)			
Length of Well Screen (L)	10 feet		- The state of the
Radius of Well Casing (rc)	0.083 feet	•	و بو ، پ ، دهستاندینیوردو دینیستو سووانشو اشارانشت داروایی
Radius of Screen (rw)	0.083 feet		و و منبینیم و در دینامین ب ۱۰ میگاندا آن و طبیع بازارانیس و ۱۰ اند
Radius of Probe (reg)		alternasis to a transportunitation removement Office in other	
Radius of Boring (rsk) Skin Effect	0.083 feet		
	Mini Trail Transde	cal probe calibra	And 4/29/08, 4/29/09
Probe Serial Number	50:118478	level Wall &	Fro
		winsitu	
Sług Data	USID Preumation	Sux to perfo	vm flet.
Length	· · · · · · · · · · · · · · · · · · ·	· 0 · 1	
weight			
Diameter			
Slug Test File	Background	Failing	Rising
File Name	OW-GOGLBG	NA.	low-coller
Start Time	12:16:04	<u> </u>	122530
End Time	12:17:59		12:26:09
Notes			4
			, c
_			
Rev D			



OW-606 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-606 L Test Date: 5-18-08

AQUIFER DATA

Saturated Thickness: 92. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-606 L)

Initial Displacement: 4.388 ft

Static Water Column Height: 108.7 ft

Total Well Penetration Depth: 109. ft

Casing Radius: 0.083 ft

Screen Length: 16.2 ft

Well Radius: 0.29 ft

SOLUTION

Aguifer Model: Confined

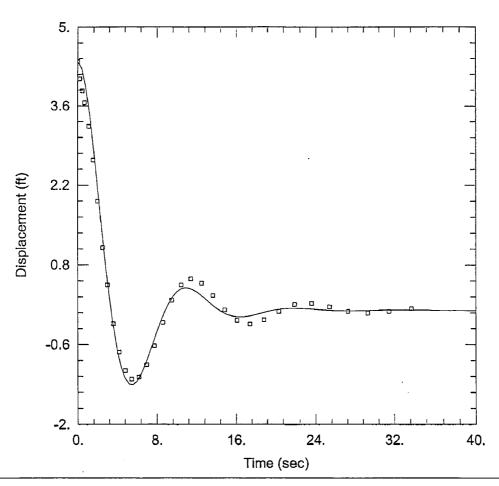
Solution Method: McElwee-Zenner

= 66.13 ft/day

 $\beta = 2.736E-317 \text{ ft}$

= 0.

v(0) = 0. ft/day



OW-606 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-606 L
Test Date: 5-18-08

AQUIFER DATA

Saturated Thickness: 92. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-606 L)

Initial Displacement: 4.388 ft

Static Water Column Height: 108.7 ft

Total Well Penetration Depth: 109. ft

Screen Length: 16.2 ft

Casing Radius: 0.083 ft

Well Radius: 0.29 ft

SOLUTION

Aquifer Model: Confined

Solution Method: Butler

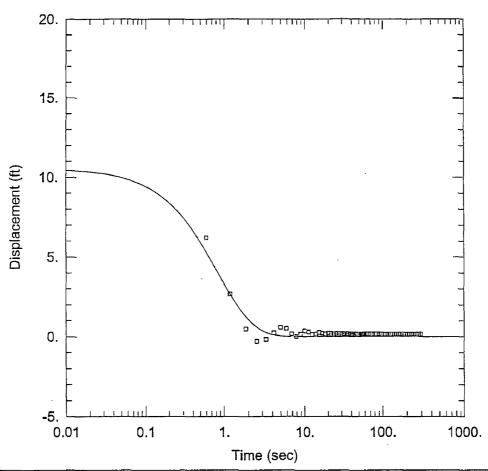
K = 67.4 ft/day

Le = 85.16 ft

MACTEC

SLUG TEST REPORT

Project Name: TPCOL	CO4CB-OT- Project Number:	-1950 Page of	
Client: Beckful	Contractor: MACTEC		
Location: Ow -(2)U	MACTEC Rep: Kin Chalo.	- Smill Date: 05/3	20108
UNITS			
Length	Feat	· · · · · · · · · · · · · · · · · · ·	
Time	Minutes	<u> </u>	
Well Data	F	Find Stickup = :	3,77 Fom 95.
Static Water Level		-TCC	and the same to the best of the same to the same to the same to the same to the same to the same to the same to
Total Well Depth	32.36' feet From	TOC	8,
Static Water Column Height (H)	feet '	· · · · · · · · · · · · · · · · · · ·	
	Background	Falling Head	Risino Head
Observed Initial Displacement (H _a)	NA NA	·	
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Denth to Top of Well Screen (d)			
ength of Well Screen (L)	10 feet	·	
Radius of Well Casing (rc)	0,083 feet		
Radius of Screen (rw)	0.083 feet		
tadius of Probe (reg)		·	
tadius of Boring (rsk) Skin Effect	0.083 feet		
	minie troll Transa	ucar probe at 4	29/00, Exp 4/29/09.
robe Serial Number	5n:118478	fevel Toll @=	too
		winster.	• .
lug Data	USED presenti	c slug to renfor	mi Skrifest.
enoth	1	. 0 1	0
eight			
lameter			
lug Tesi File	Background	Failing	Rising
he Name	ow-621UBG	NA .	100-621UR
tart Time	4.55.02		15:01:55
nd Time	14:56:38		15:06:56
otes			
		*	ettern et a
		ang manahin di dinang manahin nanganan dinangan di dinangan manahin na dinangan di dinangan di dinangan di dina Manahan dinangan manahin manahan manahan di dinangan di dinangan di dinangan di dinangan di dinangan di dinang	



OW-621 U RISING HEAD TEST

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-621 U
Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 27.56 ft

WELL DATA (OW-621 U)

Initial Displacement: 10.56 ft
Total Well Penetration Depth: 30. ft

Casing Radius: 0.083 ft

Static Water Column Height: 27.56 ft

Screen Length: 15.6 ft Well Radius: 0.3 ft

SOLUTION

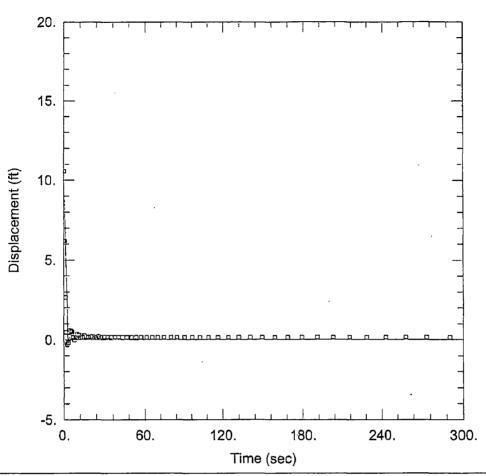
Aquifer Model: Unconfined

Kr = 94.35 ft/day

 $Kz/Kr = \overline{1}$.

Solution Method: KGS Model

Ss = $3.846E-12 \text{ ft}^{-1}$



OW-621 U RISING HEAD TEST

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-621 U
Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: <u>27.56</u> ft Anisotropy Ratio (Kz/Kr): <u>1.</u>

WELL DATA (OW-621 U)

Initial Displacement: 10.56 ft
Total Well Penetration Depth: 30. ft

Casing Radius: 0.083 ft

Static Water Column Height: 27.56 ft

Screen Length: 15.6 ft Well Radius: 0.3 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Springer-Gelhar

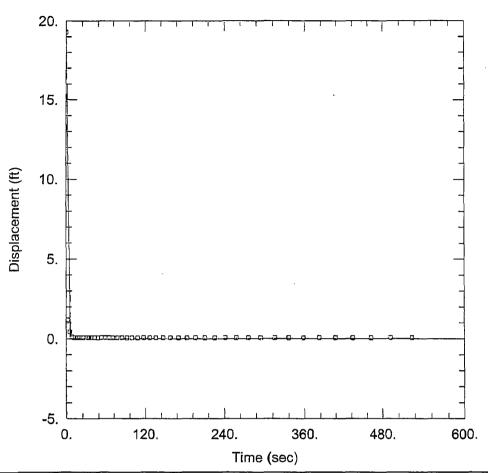
K = 68.89 ft/day

Le = 7.075 ft

MACTEC

SLUG TEST REPORT

Project Name: TDCOL	Project Number:	Page of	
Client: Buchtal	Contractor: MACTEC	·	
Location: (XI) -(211)	MACTEC Rep: Kin Chalis Smith	Daté: 05/17	198
UNITS	The Charles Surprise		
Length	Feet		
Time	Minutes		The second section of the second seco
Well Data		FireStake	= 327 tomgs.
Static Water Level	4.13 feet From ToC		
Total Well Depth	111.55' feet From ToC	<u> </u>	
Static Water Column Height (H)	0742 feet		
	Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	· · · NA ·		·
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (6)		NAME OF THE OWNER OF THE OWNER, THE OWNER, THE OWNER, THE OWNER, THE OWNER, THE OWNER, THE OWNER, THE OWNER,	
Length of Well Screen (L)	10 feet		
Radius of Well Casing (rc)	0.083 feet		
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)		<u> </u>	
Radius of Boring (rsk) Skin Effect	0.083 feet		
,	Minitroll Transolver Ca	librated 4	25/08 EXP 4/29/09!
Probe Serial Number	Sn: 103345		
			7
Siug Data 5/10 #2			
Length :	65.438 inches		
weight'	8.811 165.		
Diameter	1,662 incle		
Sing Test File	Background .	Falling	Rising
File Name	OW-621LBG OW-1	621LF	0W-621LR
Start Time	مواده پورز «مود» در دارسی مصحصه میشود میشود با از از از از از از از از از از از از از	19:05	13:34:46
End Time	13:15:32 13:	01141	13:43:41
Notes .			
	pot Shen well and re	3000	
•	001-6011 BG 04) -	10-045-65	zilat)
•	13:49:25 14:0	314	
	13:59:51 141	20 10 2 —	
•	}		



OW-621 L FALLING HEAD TEST 5-17-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-621 L
Test Date: 5-17-08

AQUIFER DATA

Saturated Thickness: 88.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-621 L)

Initial Displacement: 19.29 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 108.9 ft

Screen Length: 15. ft

Well Radius: 0.3 ft

SOLUTION

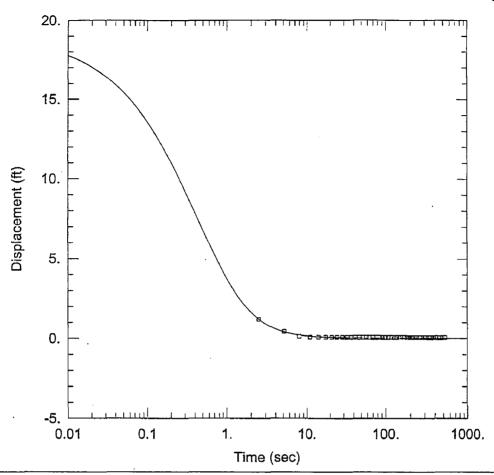
Aquifer Model: Confined

. <u>Commica</u>

Solution Method: Butler

Le = 0.1 ft

 $K = 91.59 \, \text{ft/day}$



OW-621 L FALLING HEAD TEST 5-17-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-621 L
Test Date: 5-17-08

AQUIFER DATA

Saturated Thickness: 88.5 ft

WELL DATA (OW-621 L)

Initial Displacement: 19.29 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 108.9 ft

Screen Length: 15. ft Well Radius: 0.3 ft

SOLUTION

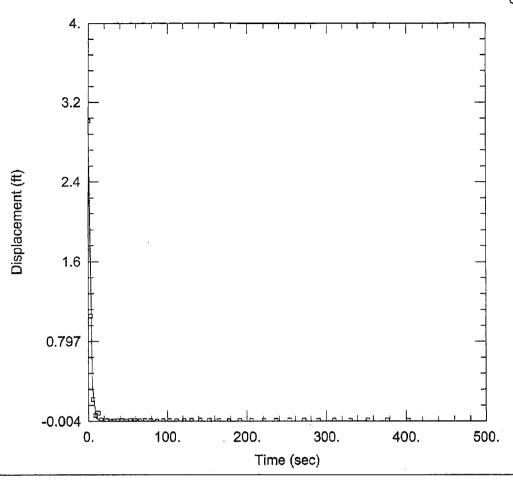
Aquifer Model: Confined

Kr = 71.28 ft/day

Kz/Kr = 1.

Solution Method: KGS Model

Ss = $0.0001716 \text{ ft}^{-1}$



OW-621 L RISING HEAD TEST 5-17-08

PROJECT INFORMATION

Company: Turkey Point

Client: BECHTEL

Project: 6469 07 1

Project: 6468-07-1950 Location: Turkey Point Test Well: OW-621 L Test Date: 5-17-08

AQUIFER DATA

Saturated Thickness: 88.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-621 L)

Initial Displacement: 3.011 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 108.9 ft

Screen Length: 15. ft Well Radius: 0.3 ft

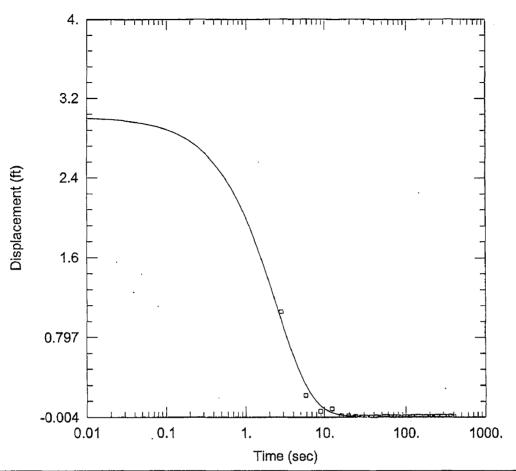
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 31.07 ft/day

Le = 41.67 ft



OW-621 L RISING HEAD TEST 5-17-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-621 L

Test Date: 5-17-08

AQUIFER DATA

Saturated Thickness: 88.5 ft

WELL DATA (OW-621 L)

Initial Displacement: 3.011 ft
Total Well Population Depth: 110

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 108.9 ft

Screen Length: 15. ft Well Radius: 0.3 ft

SOLUTION

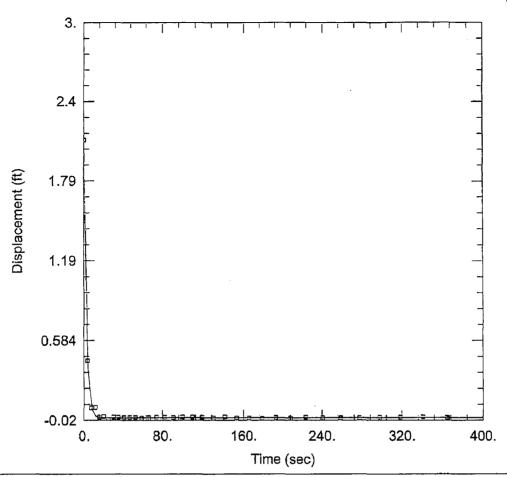
Aquifer Model: Confined

Kr = 33.31 ft/day

Kz/Kr = 1.

Solution Method: KGS Model

Ss = $1.13E-12 \text{ ft}^{-1}$



OW-621 L RISING HEAD TEST # 2 5-17-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-621 L Test Date: 5-17-08

AQUIFER DATA

Saturated Thickness: 88.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-621 L)

Initial Displacement: 2.103 ft Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 108.9 ft

Screen Length: 15. ft Well Radius: 0.3 ft

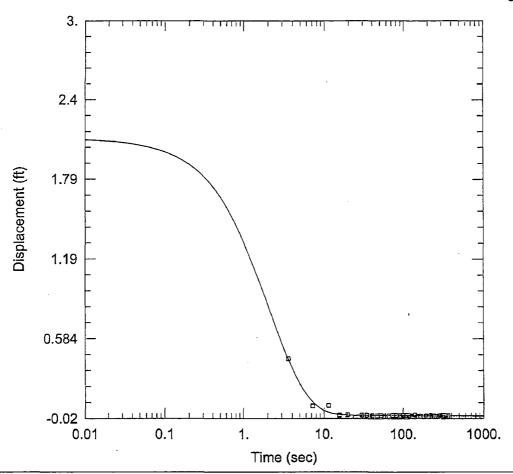
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 35.72 ft/day

Le = 0.1 ft



OW-621 L RISING HEAD TEST # 2 5-17-08

PROJECT INFORMATION

Company: Turkey Point

Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-621 L
Test Date: 5-17-08

AQUIFER DATA

Saturated Thickness: 88.5 ft

WELL DATA (OW-621 L)

Initial Displacement: 2.103 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 108.9 ft

Screen Length: 15. ft Well Radius: 0.3 ft

SOLUTION

Aquifer Model: Confined

Kr = 30.4 ft/day

Kz/Kr = 1.

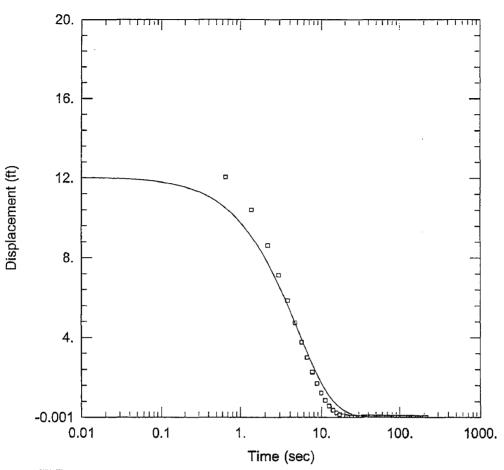
Solution Method: KGS Model

Ss = 5.781E-8 ft⁻¹

MACTEC

SLUG TEST REPORT

Project Name: TPCOL	Le4Ge - O- Project Number:	7-1950 Page 1 of	(
Client: Beolitel	Contractor: MACTEC		
Location: 00-621L	() (-Snuffl Date: 05/2	0,08
UNITS			
Length	Feet		
Time	Minutes		
Well Data		Fml Stick	up=3.271
Static Water Level	4.71 feet From	Toc	
Total Well Depth	1111.55 real From	toc	
Static Water Column Height (H)	feet		
	Background	Falling Head	Rising Head
Observed initial Displacement (H ₀)	. NA		
Saturated Thickness (b)	feet		(**********************************
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)			· · · · · · · · · · · · · · · · · · ·
Length of Well Screen (L)	feat	ـــــــــــــــــــــــــــــــــــــ	
Radius of Well Casing (rc)	0.083 feet	•	
Radius of Screen (rw)	0.083 feat		٠ - رسيبيدريم دسيدريم د دست
Radius of Probe (reg)			
Radius of Boring (rsk) Skin Effect	0.083 feet		
	minitral Trans	LUCER probe California	Ha tonlos Septalon.
Probe Serial Number	5n:118478	Level Trolle	700
		winsitu	•
Siug Data	USED PREUma	tic slug to pu	frintest.
Length :		0 '	
weight			
Diameter			
Stug Test Flie	Background	Falling	Rising
File Name	04-621LBG	NA	Low-lazILR
Start Time	15:14:40		5'22'48
End Time	15:17:33		15,26:44
Notes			1
Revn		·	·



OW-621 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-621 L
Test Date: 5-17-08

AQUIFER DATA

Saturated Thickness: 88.5 ft

WELL DATA (OW-621 L)

Initial Displacement: 12.05 ft

Total Well Penetration Depth: 110. ft Casing Radius: 0.083 ft

Static Water Column Height: 108.3 ft

Screen Length: 15. ft Well Radius: 0.3 ft

SOLUTION

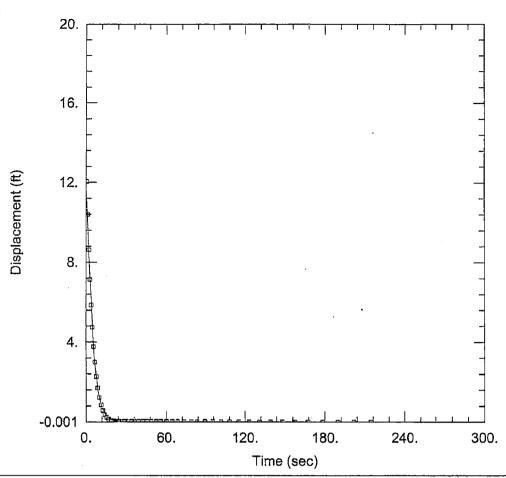
Aquifer Model: Confined

Kr = 16.66 ft/day

 $Kz/Kr = \overline{1}$.

Solution Method: KGS Model

Ss = $1.13E-12 \text{ ft}^{-1}$



OW-621 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-621 L
Test Date: 5-17-08

AQUIFER DATA

Saturated Thickness: 88.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-621 L)

Initial Displacement: 12.05 ft Static Water Column Height: 108.3 ft

Total Well Penetration Depth: 110. ft Screen Length: 15. ft

Casing Radius: 0.083 ft Well Radius: 0.3 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

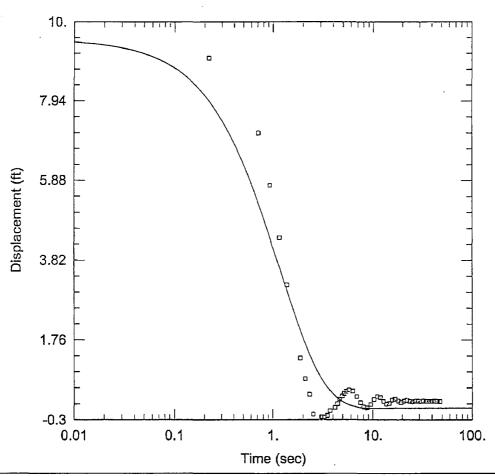
K = 16.65 ft/day Le = 117.9 ft

MACTEC

SLUG TEST REPORT

,÷:

-2001		10110 m 1000 i	,
Project Name: 3 P COL	Project Number:	\$168-07-186 Page	of
alient: Berntle	Contractor: MACTEC		
Location: Ow -636 U	MACTEC Rep: CHS	Date: <u>5</u>	21,08
UNITS .			
Length	Feet		
Time	Minutes		
Well Data			<i>;</i>
Static Water Level	4.35 feet		
Total Well Depth	31,35 feet .		
Static Water Column Height (H)	feet		·
	Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	. NA	NA	
Saturated Thickness (b)	feet .		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1	1700 00 00 00 00 00 00 00 00 00 00 00 00	
Depth to Top of Well Screen (d)	•		
Length of Well Screen (L)	10 feet		
Radius of Well Casing (rc)	0.083 feet		
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)	0.75 inch		
Radius of Boring (rsk) Skin Effect	0.083 feet		* Constitution and Constitution of Assets papers going
		O alebrated 4%	100 Expais 109.
Probe Sedal Number 50.		vinsta	and the second s
			* -
Slug Data	presmatic S	109	•
Length			
weight	**************************************	-	
Diameter			· .
Slug Test File	Background	Falling	Rising
File Name	DW-636UB6	NA	OW-1360P
Start Time			0W-6310 UR Test Z
End Time			
Notes		ر بيد بيد بيد در المراجعين المراجعين المراجعين المراجعين المراجعين المراجعين المراجعين المراجعين المراجعين الم	<u> </u>
	0W-636WB	<u>000-6364</u> t	14-ST
•	12:05:37	12.10.35	
	12:06:2+	12:11:13	
		· · · · · · · · · · · · · · · · · · ·	The second secon
50			
Rev 0	<u> </u>		



OW-636 U RISING HEAD TEST 5-21-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-636 U

Test Date: 5-21-08

AQUIFER DATA

Saturated Thickness: 28.85 ft

WELL DATA (OW-636 U)

Initial Displacement: 9.553 ft Total Well Penetration Depth: 29.8 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.85 ft

Screen Length: 17. ft Well Radius: 0.25 ft

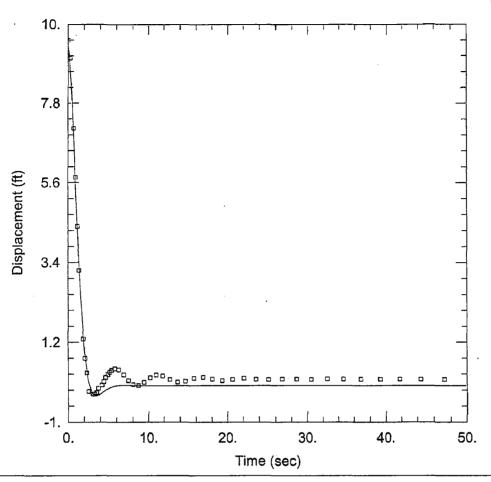
SOLUTION

Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 57.27 ft/day $= 3.846E-12 \text{ ft}^{-1}$

Kz/Kr = 1.



OW-636 U RISING HEAD TEST 5-21-08

PROJECT INFORMATION

Company: <u>Turkey Point</u>
Client: <u>BECHTEL</u>
Project: <u>6468-07-1950</u>
Location: <u>Turkey Point</u>
Test Well: <u>OW-636 U</u>

Test Date: 5-21-08

AQUIFER DATA

Saturated Thickness: 28.85 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-636 U)

Initial Displacement: 9.553 ft

Total Well Penetration Depth: 29.8 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.85 ft

Screen Length: 17. ft

Well Radius: 0.25 ft

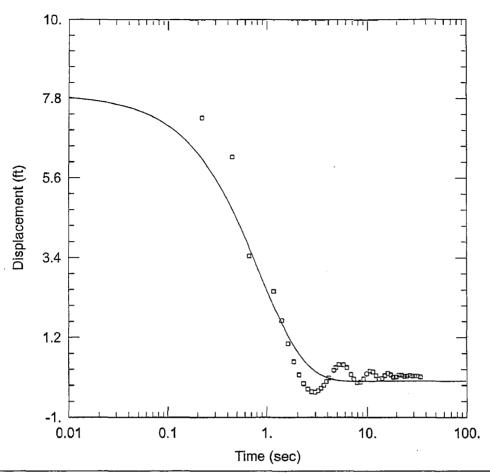
SOLUTION

Aguifer Model: Unconfined

K = 50.64 ft/day

Solution Method: Springer-Gelhar

Le = 17.14 ft



OW-636 U RISING HEAD TEST # 2 5-21-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-636 U
Test Date: 5-21-08

AQUIFER DATA

Saturated Thickness: 28.85 ft

WELL DATA (OW-636 U)

Initial Displacement: 7.909 ft

Total Well Penetration Depth: 29.8 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.85 ft

Screen Length: 17. ft

Well Radius: 0.25 ft

SOLUTION

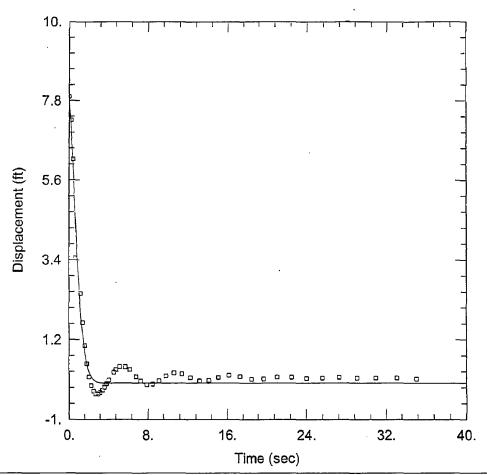
Aquifer Model: Unconfined

Kr = 79.27 ft/day

Kz/Kr = 1.

Solution Method: KGS Model

Ss = $3.846E-12 \text{ ft}^{-1}$



OW-636 U RISING HEAD TEST # 2 5-21-08

PROJECT INFORMATION

Company: <u>Turkey Point</u> Client: BECHTEL

Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-636 U
Test Date: 5-21-08

AQUIFER DATA

Saturated Thickness: 28.85 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-636 U)

Initial Displacement: 7.909 ft

Total Well Penetration Depth: 29.8 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.85 ft

Screen Length: 17. ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: Springer-Gelhar

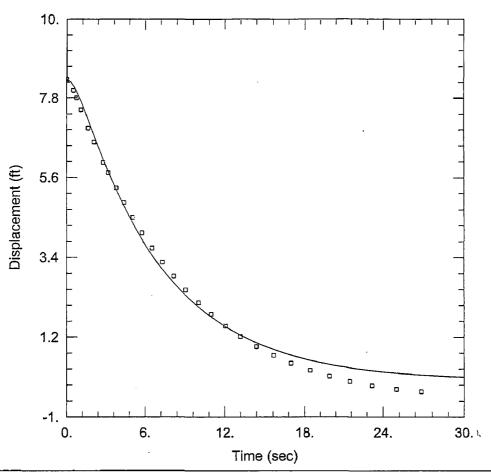
K = 64.33 ft/day

Le = 6.95 ft

#MACTEC

SLUG TEST REPORT

Project Name: TROL	Project Number: 4	0468-07-189 Page	of [
Client: Bachtle#	Contractor: MACTEC		<u> </u>
Location: . DW-6364		Date: 5	71,08
UNITS	MACTEC Rep: CHB	- Julio - L.	
Length	Feet		•
Time	Minutes		
Well Data			
Static Water Level	ス.升 feet		
Total Well Depth	111.75 feet	err arreits dissatticum attebië end die populationalepopil gein, by	
Static Water Column Height (H)	feet		
Commo Video Constitution (1.0)	- Background	Falling Head	District Name
Observed Initial Displacement (H ₀)	NA ·	NA	Rising Head
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		MATTERN S AND S AN
Depth to Top of Well Screen (d)	ASSUME 1 10 1	- 1000	and the second s
Length of Well Screen (L)	feet		
Radius of Well Casing (rc)	0.083 feet		
	0.083 feet	· · · · · · · · · · · · · · · · · · ·	
Radius of Screen (rw)			
Radius of Probe (reg) Radius of Boring (rsk) Skin Effect	0.083 feet		
Radius di Bolkija (tek) Shat Elleca	minitral @ 700	calibrated 4.	alaa an 4/2/29
Probe Serial Number	5n: 118478 4	insitu	<u> </u>
Probe Senai Number	Dic. 11 CF20	<u> </u>	•
Slug Data	previouslic Slu		
	7. 2511.251.0		
Length			
weight			
Diameter Slup Test File	Background	Failing	Rising
File Name	OW-636 L BG	NA-	au-lessa LR
Start Time	12:23:14		10W-636] RTGS+2
End Time ·	12:29:22		
Notes			
	00-636 R	040=636	LETEST !
	12:32:42	12.38	253
	12:33:15	12142	
`			



OW-636 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: <u>Turkey Point</u> Client: BECHTEL

Project: 6468-07-1950 Location: Turkey Point Test Well: OW-636 L Test Date: 5-21-08

AQUIFER DATA

Saturated Thickness: 88. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-621 L)

Initial Displacement: 8.321 ft

Total Well Penetration Depth: 111. ft

Casing Radius: 0.083 ft

Static Water Column Height: 111.7 ft

Screen Length: 17.5 ft Well Radius: 0.25 ft

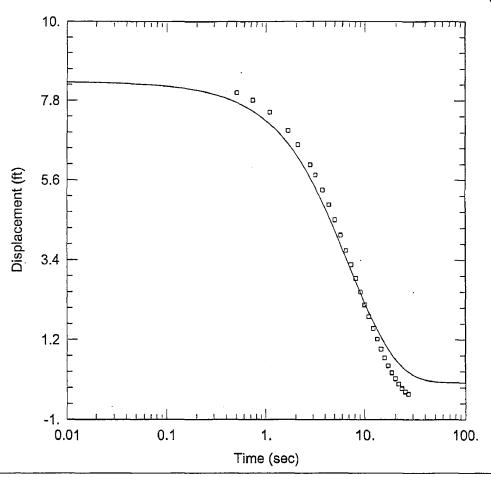
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 10.08 ft/day

Le = 158.1 ft



OW-636 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-636 L
Test Date: 5-21-08

AQUIFER DATA

Saturated Thickness: 88. ft

WELL DATA (OW-636 L)

Initial Displacement: 8.321 ft
Total Well Penetration Depth: 111. ft

Casing Radius: 0.083 ft

Static Water Column Height: 111.7 ft

Screen Length: 17.5 ft Well Radius: 0.25 ft

SOLUTION

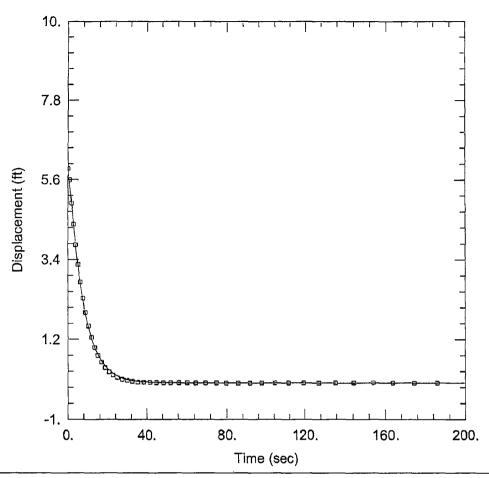
Aquifer Model: Confined

Kr = 10.58 ft/day

 $Kz/Kr = \overline{1}$.

Solution Method: KGS Model

Ss = $1.13E-12 \text{ ft}^{-1}$



OW-636 L RISING HEAD TEST # 2 5-20-08

PROJECT INFORMATION

Company: Turkey Point

Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-636 L
Test Date: 5-21-08

AQUIFER DATA

Saturated Thickness: 88. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-621 L)

Initial Displacement: 5.913 ft
Total Well Penetration Depth: 111. ft

Casing Radius: 0.083 ft

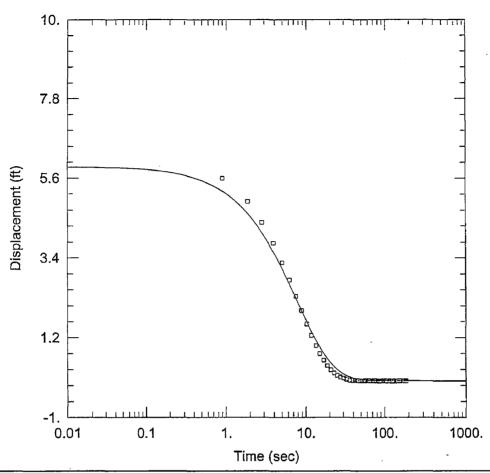
Static Water Column Height: 111.7 ft

Screen Length: 17.5 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 9.425 ft/day Le = 166.7 ft



OW-636 L RISING HEAD TEST # 2 5-20-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-636 L Test Date: 5-21-08

AQUIFER DATA

Saturated Thickness: 88. ft

WELL DATA (OW-636 L)

Initial Displacement: 5.913 ft Total Well Penetration Depth: 111. ft

Casing Radius: 0.083 ft

Static Water Column Height: 111.7 ft

Screen Length: 17.5 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined

Kr = 10.01 ft/day

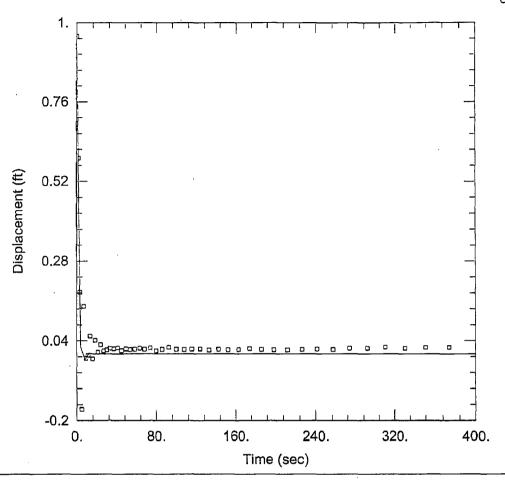
Kz/Kr = 1.

Solution Method: KGS Model

 $= 1.13E-12 \text{ ft}^{-1}$

. SLUG TEST REPORT

Project Name: TPCoL	Project Number	r Page o	
client: Bechtel	Contractor: MACTEC		
Location: OW - 706U	MACTEC Rep: Kim Chol	o Smith Date: 05,	16,08
UNITS			
Length	Feet		
Time ·	Minutes		
Well Data		Stickep3.6	1' From 25. Final
Static Water Level	3.74 feet From	n Toc	
Total Well Depth	31,72 seet From	n Toc	
Static Water Column Height (H)	2797 feet ·		
	Background	Falling Head	Rising Head
Observed initial Displacement (H ₀)	· NA		·
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)			
Length of Well Screen (L)	10 feet		و رسومه محمد در المحمد
Radius of Well Casing (rc)	0.083 feet	all which is a section of the sectio	
Radius of Screen (rw)	D.083 feet		
Radius of Probe (reg)			
Radius of Boring (rsk) Skin Effect	0.083 feet	· · · · · · · · · · · · · · · · · · ·	
	mini trail Tra	usdiner probe cad	ibasted \$/29/08
Probe Serial Number	EXP. 4/29/09.	. 1	
sn:103345		•	• :
Slug Data SUX#2			•
Length	65,438 inch	بخ	
weight .	8.811 lbs.		·
Diameter	1.662 inche	>	
Slug Test File	Background	PKS/1600 Falling	Rising
File Name	OW FOLUBG	. OW-FOGUERS	1 OW-706UR
Start Time	15.21:06	15:41:275HT	15:45:39
End Time	15/27:24	15:42:5	15:59:11
water came out of toc vent Second flats Set	Extended Cash Can ow tobu	E 15 14 5-16-08	
with extention on toc.	16:33:34 16:39:31	16.4127 FVZ	18. 16:57:23 17:02:05
Rev 0'			



OW-706 U RISING HEAD TEST 5-16-08

PROJECT INFORMATION

Company: <u>Turkey Point</u> Client: BECHTEL

Project: 6468-07-1950 Location: Turkey Point Test Well: OW-706 U Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 30.66 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-706 U)

Initial Displacement: 0.96 ft

Total Well Penetration Depth: 28.9 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.46 ft

Screen Length: 15.5 ft Well Radius: 0.25 ft

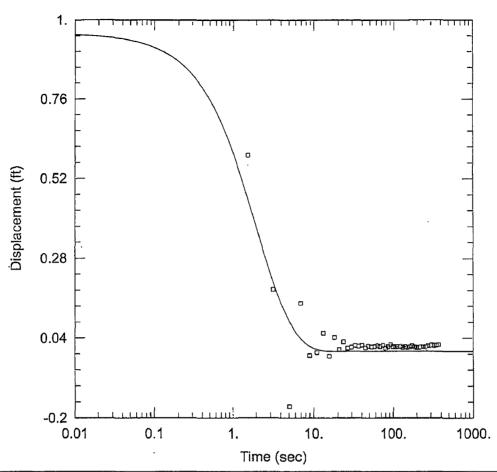
SOLUTION

Aquifer Model: Unconfined

Solution Method: Springer-Gelhar

K = 30.27 ft/day

Le = 56.23 ft



OW-706 U RISING HEAD TEST 5-16-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-706 U
Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 30.66 ft

WELL DATA (OW-706 U)

Initial Displacement: 0.96 ft

Total Well Penetration Depth: 28.9 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.46 ft

Screen Length: 15.5 ft Well Radius: 0.25 ft

SOLUTION

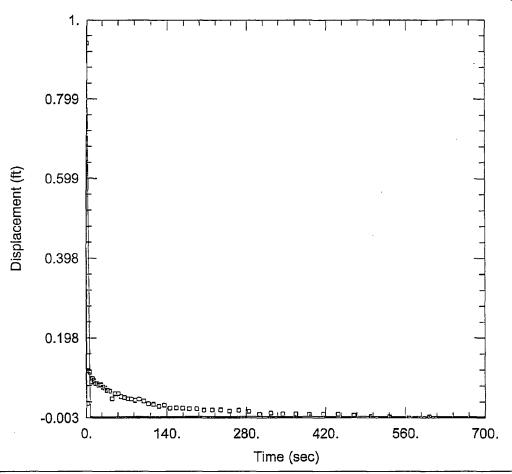
Aquifer Model: Unconfined

Kr = 31.19 ft/day

 $Kz/Kr = \overline{1}$.

Solution Method: KGS Model

Ss = $3.205E-12 \text{ ft}^{-1}$



PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-706 U
Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 30.66 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-706 U)

Initial Displacement: 0.941 ft

Total Well Penetration Depth: 28.9 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.46 ft

Screen Length: 15.5 ft Well Radius: 0.25 ft

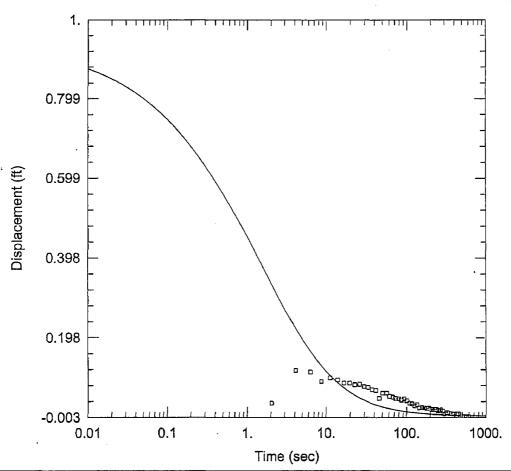
SOLUTION

Aquifer Model: Unconfined

Solution Method: Springer-Gelhar

 $K = 83.78 \, \text{ft/day}$

Le = 0.1 ft



PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-706 U Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 30.66 ft

WELL DATA (OW-706 U)

Initial Displacement: 0.941 ft Total Well Penetration Depth: 28.9 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.46 ft

Screen Length: 15.5 ft Well Radius: 0.25 ft

SOLUTION

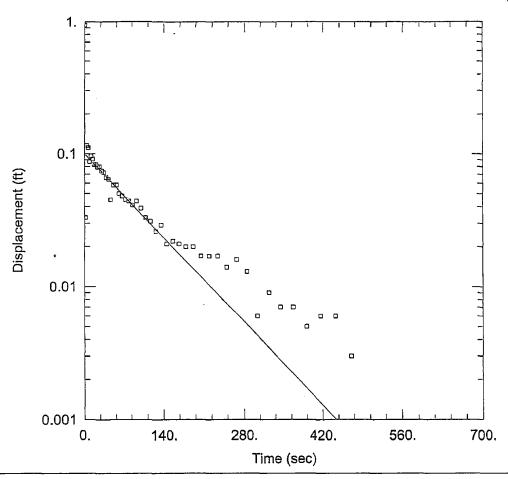
Aquifer Model: Unconfined

Kr = 6.423 ft/day

Kz/Kr = 1.

Solution Method: KGS Model

 $= 0.003205 \text{ ft}^{-1}$ Ss



PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-706 U Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 30.66 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-706 U)

Initial Displacement: 0.941 ft Total Well Penetration Depth: 28.9 ft

Casing Radius: 0.083 ft

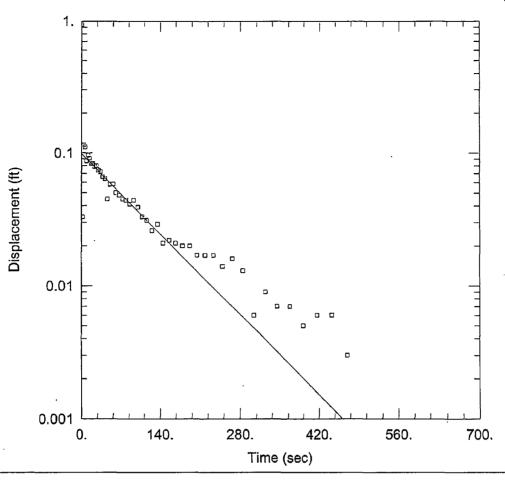
Static Water Column Height: 28.46 ft

Screen Length: 15.5 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Hvorslev

K = 0.7146 ft/dayy0 = 0.09968 ft



PROJECT INFORMATION

Company: <u>Turkey Point</u> Client: BECHTEL

Project: 6468-07-1950 Location: Turkey Point Test Well: OW-706 U Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 30.66 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-706 U)

Initial Displacement: 0.941 ft Static Water Column Height: 28.46 ft

Total Well Penetration Depth: 28.9 ft Screen Length: 15.5 ft

Casing Radius: 0.083 ft Well Radius: 0.25 ft

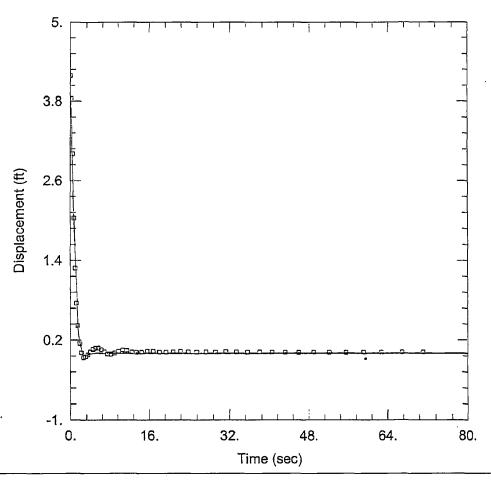
SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 0.5455 ft/day y0 = 0.09865 ft

SLUG TEST REPORT

Project Name: TPCOL	(24/28 -c Project Number:	07-450 P	age of	
Client: Bechtel	Contractor: MACTEC			
Location: OW -706 U	MACTEC Rep: Kim Charls-	Sutth D	ate: 0 <u>5/20</u>	108
UNITS			<u> </u>	
Length	Feet			Print with Militages sections on the communication as the con-
Time	Minutes		, , , , , , , , , , , , , , , , , , , 	
Well Data	1	Find Stick	up= 3,0	ol' From g.S.
Static Water Level	3.74 feet From	TOC		
Total Well Depth	31.72 feet From	TóC		
Static Water Column Height (H)	feret			
	Background	Falling H	eadbae	Rising Head
Observed initial Displacement (H ₀)	. NA			
Saturated Thickness (b)	feet	· · · · · · · · · · · · · · · · · · ·		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1			
Depth to Top of Well Screen (d)				
Length of Well Screen (L)	Test	······································	-,	
Radius of Well Casing (rc)	0.083 feet		·	
Radius of Screen (rw)	0.083 faet			
Radius of Probe (reg)				
Radius of Boring (rsk) Skin Effect	0.083 feat			
	mini Troll Translex	ree probe co	librated	T/29/08, ELP . H/29/09
Probe Serial Number	5n: 118478	' Level	, Troll @	700
		Win	2HV	
Slug Data	user presmatic	= 5 lug to	perfo	mjest.
Length	1			
weight				
Diameter				···
Slug Test File	Background	Falling		Rising
File Name	au-Facuba	NA_	 -	0W-706UP
Start Time	09:55:26			10:00:13
End Time	01,36,33			10,0,727
Notes				4 ,
	0W-706UR			
	10:03:40			
			**	
		·· · ·	i	
Rev 0		·····	<u> </u>	



OW-706 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: <u>Turkey Point</u> Client: BECHTEL

Project: 6468-07-1950 Location: Turkey Point Test Well: OW-706 U Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 30.66 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-706 U)

Initial Displacement: 4.189 ft

Total Well Penetration Depth: 28.9 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.46 ft

Screen Length: 15.5 ft

Well Radius: 0.25 ft

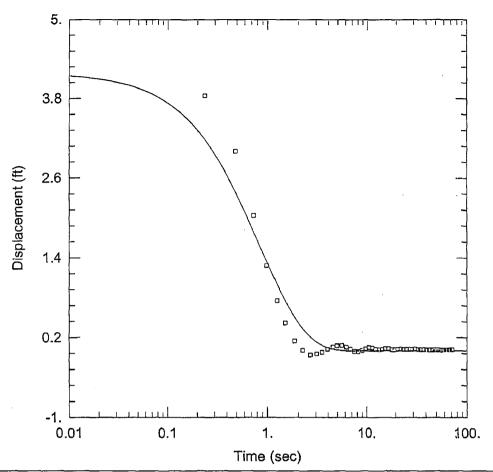
SOLUTION

Aquifer Model: Unconfined

Solution Method: Springer-Gelhar

K = 70.18 ft/day

Le = 7.303 ft



OW-706 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL

Project: 6468-07-1950

Project: 6468-07-1950 Location: Turkey Point Test Well: OW-706 U Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 30.66 ft

WELL DATA (OW-706 U)

Initial Displacement: 4.189 ft
Total Well Penetration Depth: 28.9 ft

Casing Radius: 0.083 ft

Static Water Column Height: 28.46 ft

Screen Length: 15.5 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined

Kr = 76.09 ft/day

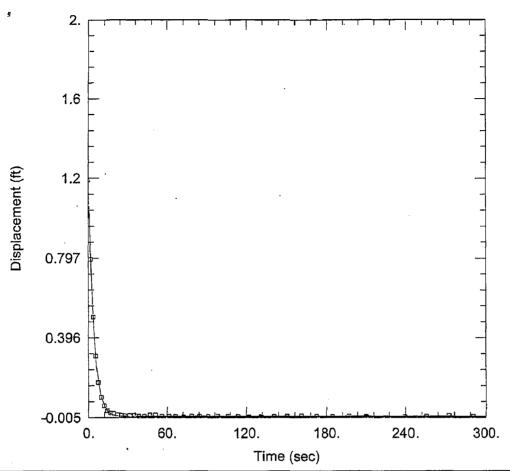
Kz/Kr = 1.

Solution Method: KGS Model

Ss = $3.205E-12 \text{ ft}^{-1}$

SLUG TEST REPORT

Project Name: TP COL	Paralant Minerian		i .	J .	T
	Project Number	:P	age of		
Client: Ochtel	Contractor: MACTEC		0-1/	**	
Location: OW FdoL	MACTEC Rep: Kin Chale	>- Surt Di	ate: 05/10	108	
units			,		
Length	Feet				·-·
Time	Minutes	·		·	
Weil Data .		Final s	Stickup	= 3.741 F	TOPL 25.
Static Water Level		<u>utoc</u>		·	
Total Well Depth	114,56 feet From	LTOC	·	. 4.	
Static Water Column Height (H)	116.8 feet				
·	Background	Falling He	ad	Rising	Head
Observed mitial Displacement (H ₀)	NA NA				
Saturated Thickness (b)	. feet				
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1			·me	
Depth to Top of Well Screen (d)					
Length of Well Screen (L)	0.0 feet	<u> </u>			
Radius of Well Casing (rc)	0.083 feet				
Radius of Screen (rw)	0,083 feet				
Radius of Probe (reg)					
Radius of Boring (rsk) Skin Effect	0.083 feet	•			
•	Transduce Min	i troil cal	-la citeo	1/29/08	80.
Probe Serial Number 50	103345		•		· 4/ 0/ 0-1
STRY 05/16/08				*	· · · · · · · ·
Siug Data Shug#2				•	
2	65,438 inch.				 · · · · · · · · · · · · · · · · · ·
ength	8.811 lbs.				
veight	1.662 inches				
Diameter State File	· .	E-W		p	
Stug Test File	Background 04-706LBG	Falling OW-706	E	Risin OW-700	
Tile Name	13:53:29	4-111	50	14140	100
Start Time	14:00:40	14' 27	<u>- ب جي ج</u>	14.	170
nd Time	111,00,40	17.37	<u> </u>	'T 58	· <u>U</u>
Notes		· · · · · · · · · · · · · · · · · · ·		+	
·					
					••••
•		•••		- · · ·	
					-
Rev D	}				



PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-706 L
Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 82.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-706 L)

Initial Displacement: 1.19 ft

Total Well Penetration Depth: 112. ft

Casing Radius: 0.083 ft

Static Water Column Height: 113.7 ft

Screen Length: 15.1 ft Well Radius: 0.25 ft

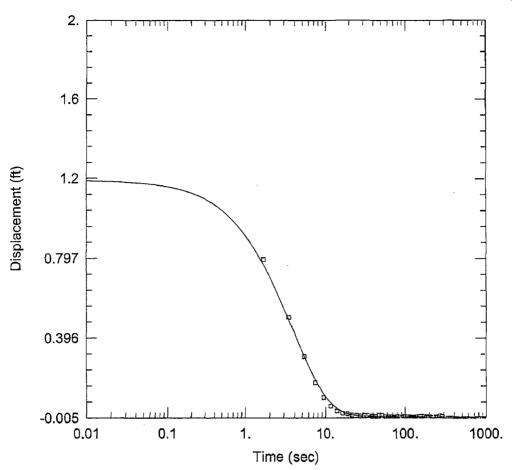
SOLUTION

Aguifer Model: Confined

Solution Method: Butler

K = 21.2 ft/day

Le = 17.46 ft



PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-706 L

Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 82.8 ft

WELL DATA (OW-706 L)

Initial Displacement: 1.19 ft Total Well Penetration Depth: 112. ft

Casing Radius: 0.083 ft

Static Water Column Height: 113.7 ft

Screen Length: 15.1 ft Well Radius: 0.25 ft

SOLUTION

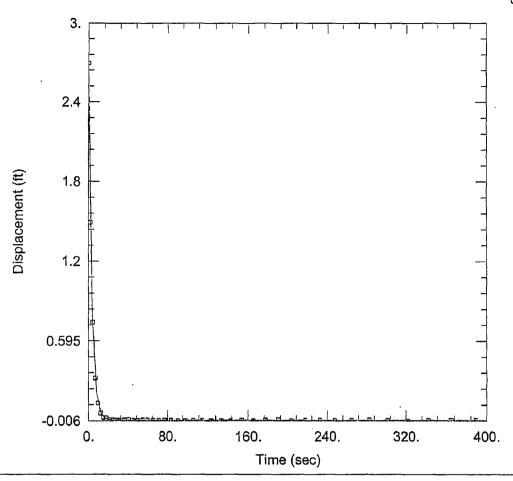
Aquifer Model: Confined

Kr = 21.97 ft/day

Kz/Kr = 1.

Solution Method: KGS Model

 $= 1.208E-12 \text{ ft}^{-1}$



OW-706 L RISING HEAD TEST 5-16-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-706 L Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 82.8 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-706 L)

Initial Displacement: 2.693 ft Total Well Penetration Depth: 112. ft

Casing Radius: 0.083 ft

Static Water Column Height: 113.7 ft

Screen Length: 15.1 ft Well Radius: 0.25 ft

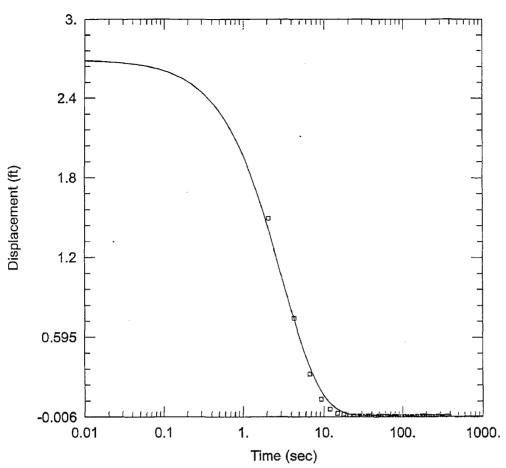
SOLUTION

Aquifer Model: Confined

K = 25.09 ft/day

Solution Method: Butler

Le = 29.71 ft



OW-706 L RISING HEAD TEST 5-16-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-706 L
Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 82.8 ft

WELL DATA (OW-706 L)

Initial Displacement: 2.693 ft

Total Well Penetration Depth: 112. ft

Casing Radius: 0.083 ft

Static Water Column Height: 113.7 ft

Screen Length: 15.1 ft

Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined

Kr = 26.07 ft/day

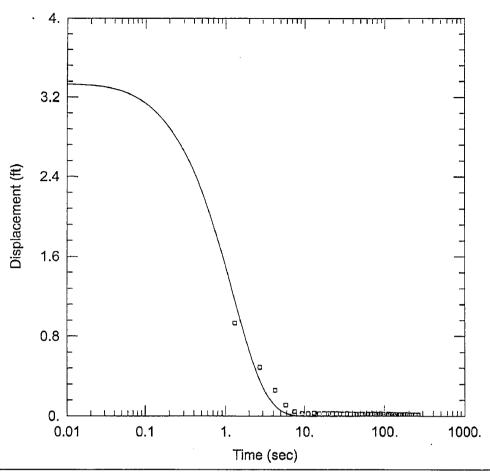
 $Kz/Kr = \overline{1}$.

Solution Method: KGS Model

Ss = $1.208E-12 \text{ ft}^{-1}$

SLUG TEST REPORT

Project Name: TPCOL	Project Numbe	г	Page i of	1	
client: Bechtel -	Contractor: MACTEC				
Location: aw-721U	MACTEC REP: Kin Chal	5 Snoth	Date: 05/15	5,08	
UNITS					
Length	Feat	· · · · · · · · · · · · · · · · · · ·			
Time .	Minutes .				
Well Data			Shickip	= 3651	From gis.
Static Water Level	4.35 feet Fm	ntoe			
Total Well Depth	28.0 feet From	ntoc			 · · · ·
Static Water Column Height (H) 23,45	2010 Feet 5-15-	<i>0</i> 8		•	
	Background	Falling !	Head	Rising	Head
Observed Initial Displacement (Ho)	NA NA			•	
Saturated Thickness (b)	feet				·
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1				· •
Depth to Top of Well Screen (d)			· · · · · · · · · · · · · · · · · · ·		
Length of Well Screen (L)	10.0 feet				
Radius of Well Casing (rc)	0.083 feet				
Radius of Screen (rw)	0.083 feet				
Radius of Probe (req)					
Radius of Boring (rsk) Skin Effect	D.083 feet			· 	
	Transducer Mini	Wall Callebra	Leal 9/29	log Exp. 9	129/09
Probe Serial Number				-	
Sn: 103345					
Siug Data Sluc #2		<u> </u>		•	
Length	65,438 inche	<u> </u>		•	
weight	8.811 65.				
Diameter	1,662 inches				
Sing Test File	Background	Falling	7	Risi	ng
File Name	cw-72/4186	1	IUF	au it	2165
Start Time	17:00:35	17:11:	(1	17:22:1	2 (5/15/00)
End Time	17:07:40	17:15:	55	07:17:0	
votes	Extended too	5.5.6	,51 ab	ue. 95.	
•	Ron BACKCYMICE	and Fall	Eir heart	10-EH+	instract
	in well owned les this proce on Rising				
	head tost styled ow-72147 on 05/16/08				
•	and Shoto no italian				
			· ·		
Rev 0	<u> </u>				



OW-721 U FALLING HEAD 5-15-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point

Test Well: OW-721 U
Test Date: 5-15-08

AQUIFER DATA

Saturated Thickness: 24.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-721 U)

Initial Displacement: 3.338 ft Static Water Column Height: 24.75 ft

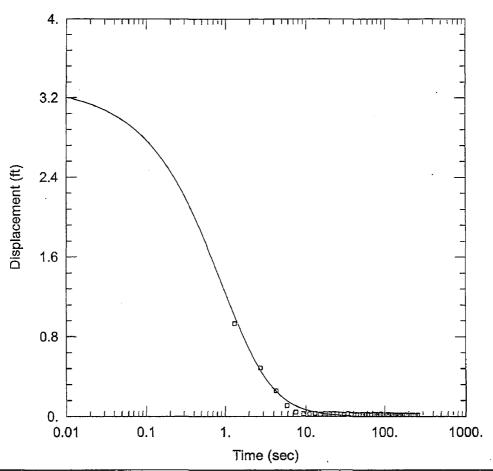
Total Well Penetration Depth: 26. ft Screen Length: 16.1 ft

Casing Radius: 0.083 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: <u>Unconfined</u> Solution Method: Springer-Gelhar

K = 45.5 ft/day Le = 1. ft



OW-721 U FALLING HEAD 5-15-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-721 U
Test Date: 5-15-08

AQUIFER DATA

Saturated Thickness: 24.75 ft

WELL DATA (OW-721 U)

Initial Displacement: 3.338 ft
Total Well Popularities Depth: 26

Total Well Penetration Depth: 26. ft

Casing Radius: 0.083 ft

Static Water Column Height: 24.75 ft

Screen Length: 16.1 ft Well Radius: 0.25 ft

SOLUTION

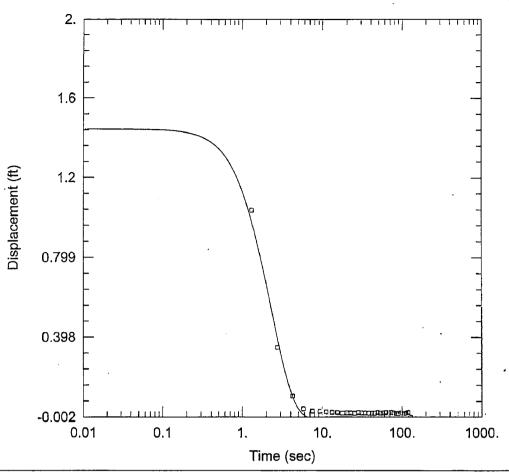
Aquifer Model: Unconfined

Kr = 45.5 ft/day

Kz/Kr = 1.

Solution Method: KGS Model

Ss = $9.486E-5 \text{ ft}^{-1}$



OW-721 U RISING HEAD 5-15-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-721 U Test Date: 5-15-08

AQUIFER DATA

Saturated Thickness: 24.75 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-721 U)

Initial Displacement: 1.444 ft Total Well Penetration Depth: 26. ft

Casing Radius: 0.083 ft

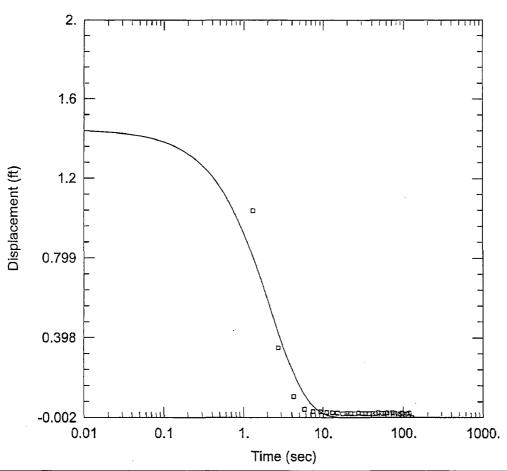
Static Water Column Height: 24.75 ft

Screen Length: 16.1 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 27.03 ft/dayLe = 46.33 ft



OW-721 U RISING HEAD 5-15-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-721 U Test Date: 5-15-08

AQUIFER DATA

Saturated Thickness: 24.75 ft

WELL DATA (OW-721 U)

Initial Displacement: 1.444 ft Total Well Penetration Depth: 26. ft

Casing Radius: 0.083 ft

Static Water Column Height: 24.75 ft

Screen Length: 16.1 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined

Kr = 32.46 ft/day

 $Kz/Kr = \overline{1}$.

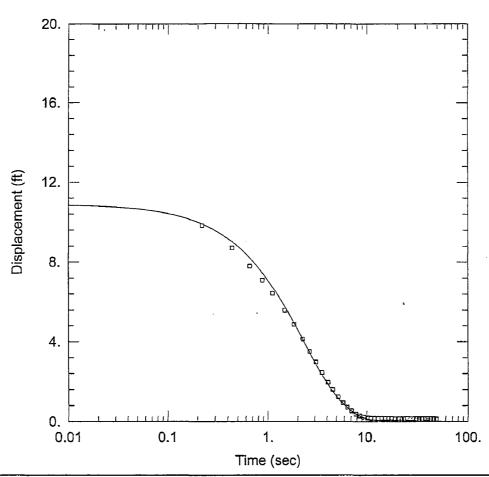
Solution Method: KGS Model

 $= 4.167E-12 ft^{-1}$



SLUG TEST REPORT

Project Name: TPCOL	Project Number:	7-PSO Page 1 of	
client: Bedfel	Contractor: MACTEC		
Location: OW-721U	MACTEC Rep: Kin Chals -5	north Date: 05,2	0,08
וואנו			
Length	Feet		
Time	Minutes	:>	
Well Data	Ţ,	il Stickup= 3.65	From 9.5.
Static Water Level	4.73 feet From	TOC	
Total Well Depth	28.0' feet Fram		4
Static Water.Column Height (H)	feet		
	Background	Falling Head	Rising Head
Observed Initial Displacement (Ha)	NA NA		·
Saturated Thickness (b)	feet		
Canductivity Anisatropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)			
Length of Well Screen (L)	(č) fest	,	
Radius of Well Casing (rc)	0.083 feet	•	
Radius of Screen (rw)	0,083 feet		
Radius of Probe (reg)	·		
Radius of Boring (rsk) Skin Effect	0.083 feet		
	Mini trall Transduce	of probe Calibrat	real 4/29/08 EXP 4/29/04
Probe Serial Number	5n! 118478	Level Trolle=	700
		winsitu	*
Slug Data	USED Proumatic	Slug to perf	vindest.
Length			
weight .			
Diameter			
Sing Test File	Background	Falling	Rising
File Name	0W-721UBG	NA	OW-721UR
Start Time	10:33:19		110:42:03
End Time	10:34:46		110:42:56
Notes			
•			
Rev 0			



OW-721 U RISING HEAD 5-20-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-721 U
Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 24.37 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-721 U)

Initial Displacement: 10.88 ft
Total Well Penetration Depth: 26. ft

Casing Radius: 0.083 ft

Static Water Column Height: 24.37 ft

Screen Length: 16.1 ft Well Radius: 0.25 ft

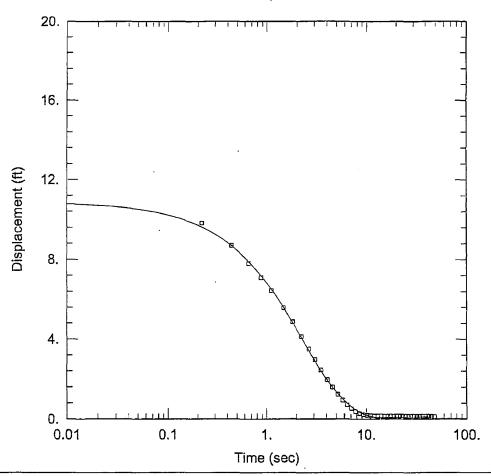
SOLUTION

Aquifer Model: Unconfined

K = 24.39 ft/day

Solution Method: Springer-Gelhar

Le = 0.1 ft



OW-721 U RISING HEAD 5-20-08

PROJECT INFORMATION

Company: Turkey Point

Client: BECHTEL

Project: 6468-07-1950 Location: Turkey Point Test Well: OW-721 U Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 24.37 ft

WELL DATA (OW-721 U)

Initial Displacement: 10.88 ft

Total Well Penetration Depth: 26. ft

Casing Radius: 0.083 ft

Static Water Column Height: 24.37 ft

Screen Length: 16.1 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined

Kr = 32.47 ft/day

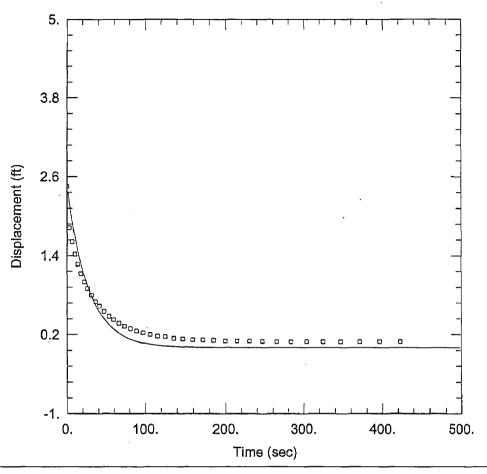
Kz/Kr = 1.

Solution Method: KGS Model

Ss = $2.056E-6 \text{ ft}^{-1}$

SLUG TEST REPORT

Project Name: TPCOL	Project Number	Page	of .
client: Bechfel	Contractor: MACTEC		
Location: OU-721L	MACTEC Rep: Kin Chilo	Date: 057	15/08
UNITS	1 1000000	3/10/12	
Length	Feet	•	•
Time	Minutes	amento, moderno ambiento en la sumetra provincia de la cultura de la cul	
Well Data	,	Final Sticker	?=3,68' Fom o.s
Static Water Level	2.17 feet From	_ Toc	
Total Well Depth	107,62 feet From	LOC_	
Static Water Column Height (H)	102,43 feet ·		
	Background	Failing Head ·	Rising Head
Observed initial Displacement (H _D)	NA NA		•
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		. parl parl
Depth to Top of Well Screen (d)		-	
Length of Well Screen (L)	10.0 feat		
Radius of Well Casing (10)	0.083 feet		
Radius of Screen (rw)	0,083 feet		
Radius of Probe (reg)			
Radius of Boring (rsk) Skin Effect	0.083 feet		
	Mini Trail Transol	voer Calibrated	1/29/08, EP. 4/29/09
Probe Serial Number -			, , , , ,
5n:103345	·		• =
Slug Data 5/20 #2			
Length	65.438 inche	2	
weight	8,811 ibs.	• •	
Diameter	1.662 inches		
Slug Test File	Background	Falling	Rising
File Name	OW-721LBG	0W-721LF	Jaw-721LR
Start Time	15:1853:52	16:02:43	1621:32
End Time	(6:00°:33	16,18:56	16.37:20
Notes ·	Extended ToC	to stor at	pare 9,5,
	through stored	2,62, p.g.	7/10/60;
_			
Rev 0			



OW-721 L FALLING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL

Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-721 L
Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 90. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-721 L)

Initial Displacement: 2.451 ft

Total Well Penetration Depth: 109. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110. ft

Screen Length: 17. ft Well Radius: 0.25 ft

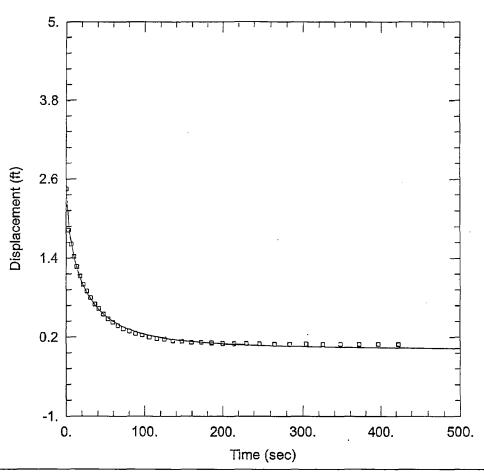
SOLUTION

Aquifer Model: Confined

Solution Method: <u>Butler</u>

K = 2.726 ft/day

Le = 0.1 ft



OW-721 L FALLING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-721 L Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 90. ft

WELL DATA (OW-721 L)

Initial Displacement: 2.451 ft

Total Well Penetration Depth: 109. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110. ft

Screen Length: 17. ft Well Radius: 0.25 ft

SOLUTION

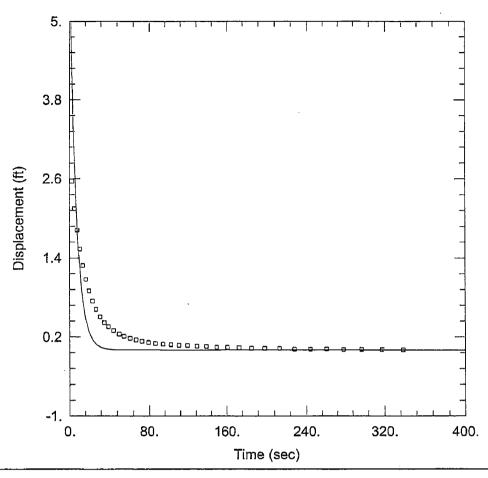
Aquifer Model: Confined

Kr = 1.13 ft/day

 $Kz/Kr = \overline{1}$.

Solution Method: KGS Model

 $= 0.0002728 \text{ ft}^{-1}$



OW-721 L RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-721 L Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 90. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-721 L)

Initial Displacement: 5.904 ft

Static Water Column Height: 110. ft

Total Well Penetration Depth: 109. ft

Screen Length: 17. ft Well Radius: 0.25 ft

Casing Radius: 0.083 ft

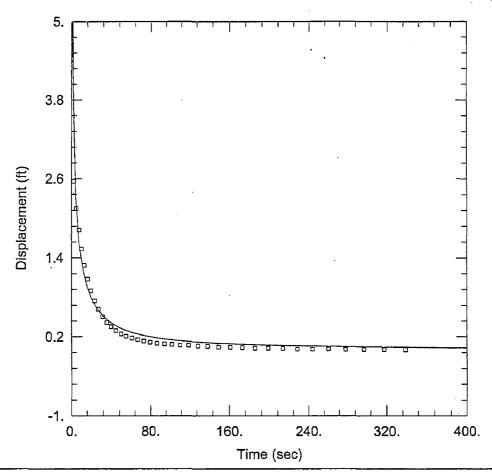
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 11.59 ft/day

Le = 0.1 ft



OW-721 L RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-721 L

Test Date: 5-16-08

AQUIFER DATA

Saturated Thickness: 90. ft

WELL DATA (OW-721 L)

Initial Displacement: 5.904 ft

Total Well Penetration Depth: 109. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110. ft

Screen Length: 17. ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined

Solution Method: KGS Model

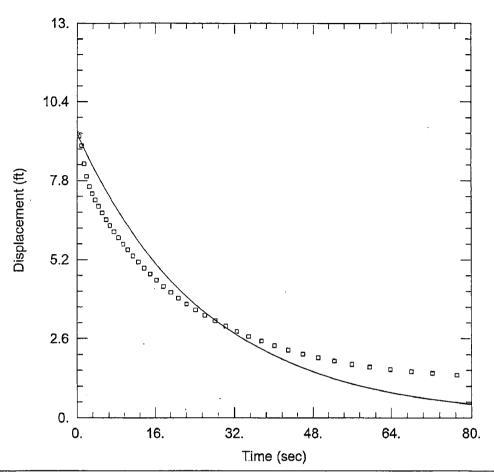
Kr = 2.91 ft/day

Ss = $0.001921 \, \text{ft}^{-1}$

 $Kz/Kr = \overline{1}$.

SLUG TEST REPORT

Project Name: TPCOL	Project Number:	0-07-1950 Page of			
client: Bechtel	Contractor: MACTEC		·		
Location: . OW -721L	MACTEC Rep: Kin Chalo- 5	Date: \$057=	20,08		
UNITS	Rim Chars-	mutu p			
1	Feet				
Length	Minutes				
Time Well Data		Final Statep= 31	681 From 98.		
Static Water Level		1			
Total Well Depth	107.62 feet from	toC	**		
Static Water Column Height (H)	feet				
	Background	Falling Head	Rising Head		
Observed trillial Displacement (H ₀)	NA NA	- Circly (1000	. Naisy read		
Saturated Thickness (b)	feat				
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1	ينين به مسيد که البالت ۱۰۵ سيد			
Depth to Top of Well Screen (d)			·		
Length of Well Screen (L)	6 feet				
Radius of Weii Casing (rc)	0.083 feet	*	· · · · · · · · · · · · · · · · · · ·		
Radius of Screen (rw)	0.083 feet				
Radius of Probe (reg)	0.003.1881				
Radius of Boring (rsk) Skin Effect	0.083 feet				
Little of Digital (124) Over Citors		nie Orden e liber	1=14/20/00/604/21/2		
Decks Daiel Number	50. 119778	level Tall	ted 4/29/08/6404/09		
Probe Serial Number	1011.1105.00	Winsitu			
Slug Data	user presimation	- Sua to pas	fries dent		
Length		· · · · · · · · · · · · · · · · · · ·	AND PROPERTY.		
weight					
Diameter		· ,			
Sing Test File	Background	Falling	Rising		
File Name	0W-721LBG	NA	OW-721LR		
Start Time	10:56:02		11:08:52		
End Time	11:04:43		11:10:18		
Notes					
Rev 0					



OW-721 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-721 L Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 90. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-721 L)

Initial Displacement: 9.341 ft

Total Well Penetration Depth: 109. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110.2 ft

Screen Length: 17. ft Well Radius: 0.25 ft

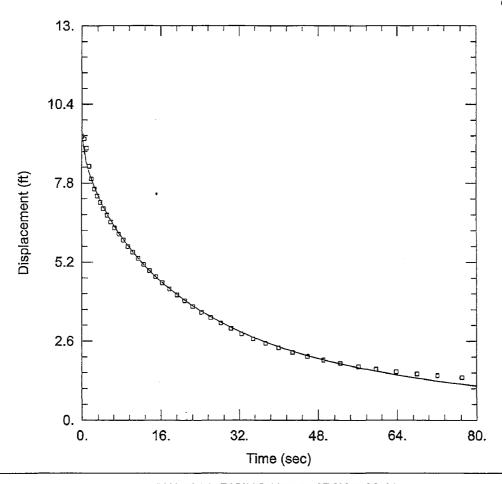
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

 $K = 2.839 \, \text{ft/day}$

Le = $0.1 \, \text{ft}$



OW-721 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-721 L
Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 90. ft

WELL DATA (OW-721 L)

Initial Displacement: 9.341 ft

Total Well Penetration Depth: 109. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110.2 ft

Screen Length: 17. ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined

Kr = 1.325 ft/day

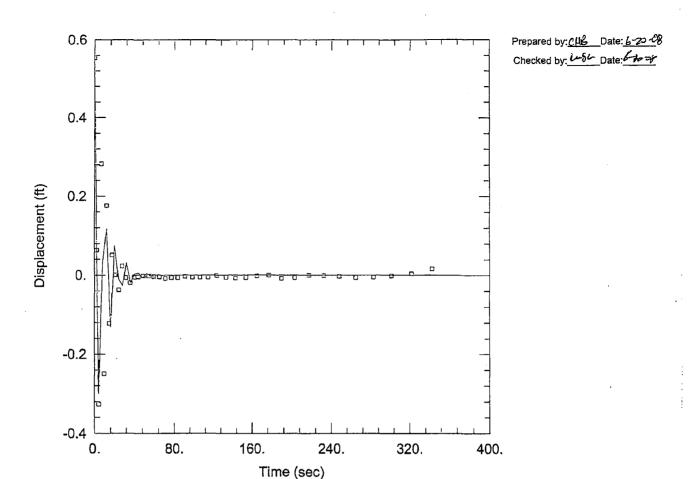
Kz/Kr = 1.

Solution Method: KGS Model

Ss = $0.0001285 \text{ ft}^{-1}$

SLUG TEST REPORT

			
Project Name: TPCO L	Project Number:	Page of	
Client Bechfel	Contractor: MACTEC		
Location: .04 - 7-3 (354	MACTEC REP: Kin Charles	-Snioth Date: 5/1	5108
UNITS			
Length	Feet		
Time 141	Minutes '		
Well Data		Sheking	?=3,27
Static Water Level	4.85 feet From	•	
Total Well Depth	30.19 feet, From		
Static Water Column Height (H) 28,34	25:34 feet 5/15/16	છ	
	- Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	NA NA		· ·
Saturated Thickness (b)	feet		
Conductivity Anisatropy (Kv/Kh)	Assume 1 to 1	namen e e calenda allere e e e e e e e e e e e e e e e e e	· · · · · ·
Depth to Top of Well-Screen (d)			-
Length of Well Screen (L)	feet		
Radius of Well Casing (rc)	0.083 feet ·		
Radius of Screen (rw)	0.083 feet	و الكنية الواقعة المراجعة المراجعة المراجعة المراجعة والمراجعة المراجعة المراجعة المراجعة المراجعة المراجعة ال	
Radius of Probe (reg)			
Radius of Boring (rsk) Skin Effect	0.083 feet	·	
	Mini trall Transle	ser pale Calibrate	d 4/29/08 4/29/A
Probe Serial Number			(/91/01-
5n: 103345			· -
Slug Data # 2			** .
Length	Ce5.438 inch	,	
weight	8.811 lbs.	•	
Diameter .	1.662 inch		
Slug Test File	Background	Falling	Rising
File Name	au-7354BG	000735UF	0W-735UB
Start Time	10:16:12	09:16:4178:50	01:36:56
End Time	10:125:07	Disgire	10:51:50
Notes	Anador exte	then to Tep of	- casing total
•	Stille = 5,28	and a second control of the second control o	<u> </u>
•			
			The second secon
Rev 0	<u> </u>		



PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950
Location: Turkey Point COL
Test Well: OW-735 U
Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: <u>26.45</u> ft Anisotropy Ratio (Kz/Kr): <u>1.</u>

WELL DATA (OW-735 U)

Initial Displacement: 0.553 ft
Total Woll Popularities Depth: 28 ft

Total Well Penetration Depth: 28. ft

Casing Radius: 0.083 ft

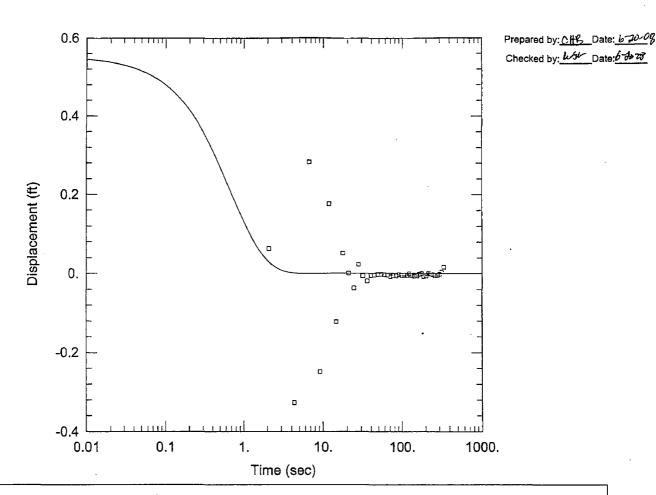
Static Water Column Height: 26.45 ft

Screen Length: 16. ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: <u>Unconfined</u> Solution Method: <u>Springer-Gelhar</u>

K = 319.2 ft/day Le = 33.28 ft



PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL Test Well: OW-735 U

Test Well: <u>OW-735 U</u> Test Date: <u>5/15/2008</u>

AQUIFER DATA

Saturated Thickness: 26.45 ft

WELL DATA (OW-735 U)

Initial Displacement: 0.553 ft

Total Well Penetration Depth: 28. ft

Casing Radius: 0.083 ft

Static Water Column Height: 26.45 ft

Screen Length: 16. ft Well Radius: 0.25 ft

SOLUTION

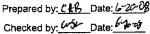
Aquifer Model: Unconfined

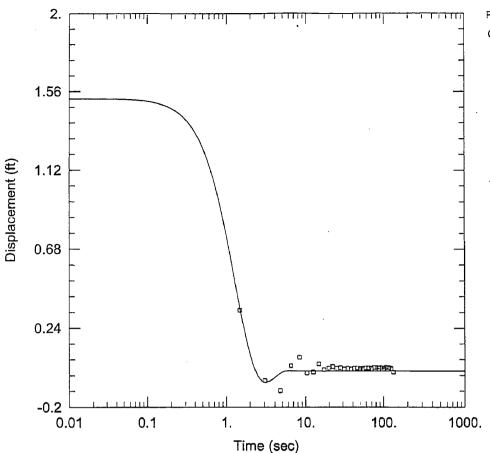
Kr = 109.5 ft/day

Kz/Kr = 1.

Solution Method: KGS Model

Ss = $3.846E-12 \text{ ft}^{-1}$





OW-735 U RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: <u>OW-735 U</u> Test Date: <u>5/15/2008</u>

AQUIFER DATA

Saturated Thickness: 26.45 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-735 U)

Initial Displacement: 1.519 ft

Total Well Penetration Depth: 28. ft

Casing Radius: 0.083 ft

Static Water Column Height: 26.45 ft

Screen Length: 16. ft Well Radius: 0.25 ft

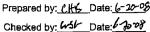
SOLUTION

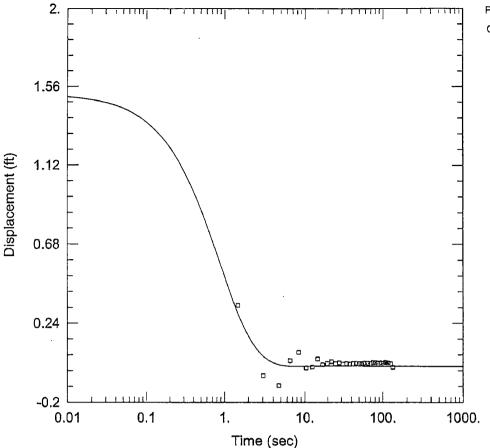
Aquifer Model: Unconfined

Solution Method: Springer-Gelhar

K = 58.21 ft/day

Le = 15.64 ft





OW-735 U RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950
Location: Turkey Point COL
Test Well: OW-735 U
Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 26.45 ft

WELL DATA (OW-735 U)

Initial Displacement: 1.519 ft

Total Well Penetration Depth: 28. ft

Casing Radius: 0.083 ft

Static Water Column Height: 26.45 ft

Screen Length: 16. ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined

Kr = 84.68 ft/day

Kz/Kr = 1.

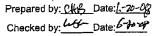
Solution Method: KGS Model

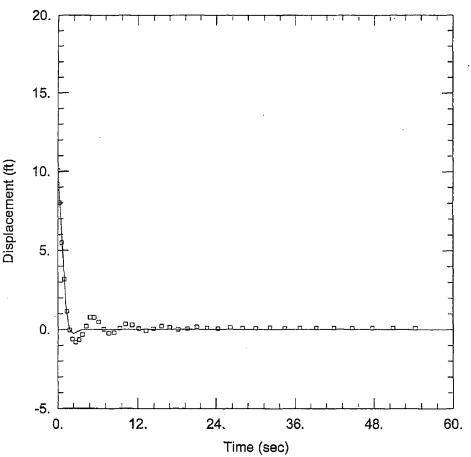
Ss = $3.846E-12 \text{ ft}^{-1}$

MACTEC

Project Name: TPCOL	. (468-	07-1950	1.	l	<u> </u>
0 11.0	Project Number:		ige of	1	
70.00	Contractor: MACTEC				
Location: TPEOL 000-7350	MACTEC Rep: Kim Charles-	-Snith Da	ite: 05/20	0100	
UNITS					
Length	Feet				
Time	Minutes				
Well Data		Fine Sticker	7 = 3.37	2 '	
Static Water Level	495 feet From -	toc		w + u ₁₂₂ u-	
Total Well Depth	30,19' feet From	Toc		•	
Static Water Column Height (H)	feet .				
	Background	Falling He	ad	Rising	Head
Observed Initial Displacement (H ₀)	NA NA			٠.	
Saturated Thickness (b)	fest				
Canductivity Anisotropy (Kv/Kh)	Assume 1 to 1			• ••••	
Depth to Top of Well Screen (d)					
Length of Well Screen (L)	lo feet				
	0.083 feet				
Radius of Well Casing (rc)					
Radius of Screen (rw)	0.083 feet				
Radius of Probe (req)					· · ·-·
Radius of Boring (rsk) Skin Effect	0.083 faet	0.00	r	41.1.8	10160
	mini Troll Transde	scel prove co	Lilizateon	. 129/00_	1-4/24/05
Probe Serial Number	sn:118478 1	evel trail		<u> </u>	
		Winsitu		<u> </u>	
Slup Data	USED Preumal	ic slug	toper	form for	- 1
Length	Sn: 11847817	05-20-08			
weight		·			
Diameter				,	
Sing Test File	Background	Falling		. Ris	
Flie Name · .	0W-735LBG	NA		ow-73	`
Start Time	08:32:51			08:49	
End Time	08:37:09			1.08:49	127
Notes	0W-735UR	OW.735	112	0U-7	 বে∌
	00:53:57	08:591		01:03:	·
	00.57.33	01,00	5	09.04	<u> </u>

Rev 0					





OW-735 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL Test Well: OW-735 U Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 26.35 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-735 U)

Initial Displacement: 10.05 ft

Total Well Penetration Depth: 28. ft

Casing Radius: 0.083 ft

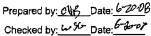
Static Water Column Height: 26.35 ft

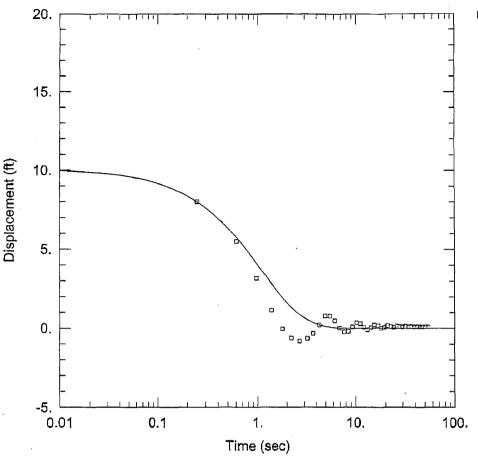
Screen Length: 16. ft Well Radius: 0.25 ft

SOLUTION

Solution Method: Springer-Gelhar Aquifer Model: Unconfined

K = 80.18 ft/dayLe = 7.402 ft





OW-735 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950
Location: Turkey Point COL
Test Well: OW-735 U
Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 26.35 ft

WELL DATA (OW-735 U)

Initial Displacement: 10.05 ft

Total Well Penetration Depth: 28. ft

Casing Radius: 0.083 ft

Static Water Column Height: 26.35 ft

Screen Length: 16. ft

Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined

Kr = 70.7 ft/day

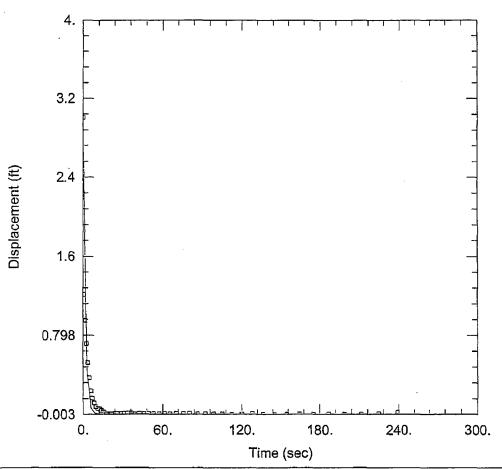
Kz/Kr = 1.

Solution Method: KGS Model

Ss = $2.291E-10 \text{ ft}^{-1}$

#MACTEC

Project Name: TPCoL	Project Number:	Page	, [
0 1 0		Fage 4 c	or {
Client: Secrete	MACTEC Rep: Kvin Charles	50.11	17 20
Location: OW - 735L	MACTEC Rep: Fron Charles	Sneth Date: 051	12/08
UNITS .	·	· ·	
Length ·	Feet		
Time	Minutes		
Well Data		SHOKEP= 3,581 :	
Static Water Level	297 feet from	Toc	
Total Well Depth 11.68	103 to squeet from	15.TOC 75-13-03	1,
Static Water Column Height (H) 108:71	1 Lings Teet 1	185-13-08	
	5-(3-0%) Background	Falling Head	Rising Head
Observed Initial Displacement (Ha)	NA NA		·
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Wall Screen (d)	96,91		
Length of Well Screen (L)	10 feet		
Radius of Well Casing (rc)	0.083 feet *	•	
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)	·		the second secon
Radius of Boting (rsk) Skin Effect	0.083 feet		
्रीस्टर स	probe Calibrated	4/29/00 EXP.	4/29/09
Probe Serial Number 50:	103345 Min	itroll trasduce	2
Slug Data #2			•
Length	65,438 inches		
weight	8.811 ibs.		
Diameter	1.662 inches		
Sing Test File	Background	Failing	Rising
File Name	0W-735LBG	QU-735LF	OW-735LR
Start Time	16:48:56	17:02:43	17.13:33
End Time	16:58:22	17:06:57	17:15:55
Notes			
	Extended Casin	10 5:50 0	-12-6
	mu an told	- IS- RY	3/12/08.
•	***************************************		
Rev 0			



OW-735 L FALLING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-735 L
Test Date: 5-15-08

AQUIFER DATA

Saturated Thickness: 87. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-735 L)

Initial Displacement: 3.004 ft

<u>5.00+</u> 10

Static Water Column Height: 110.4 ft

Total Well Penetration Depth: 110. ft

Screen Length: 17.7 ft

Casing Radius: 0.083 ft

Well Radius: 0.25 ft

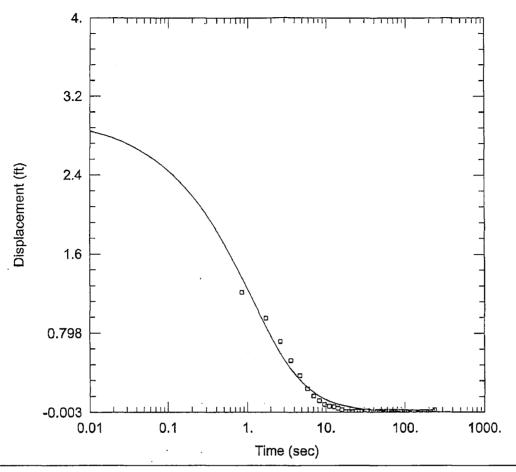
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 49.09 ft/day

Le = 0.1 ft



OW-735 L FALLING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: Turkey Point
Client: BECHTEL
Project: 6468-07-1950
Location: Turkey Point
Test Well: OW-735 L
Test Date: 5-15-08

AQUIFER DATA

Saturated Thickness: 87. ft

WELL DATA (OW-735 L)

Initial Displacement: 3.004 ft
Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110.4 ft

Screen Length: 17.7 ft Well Radius: 0.25 ft

SOLUTION

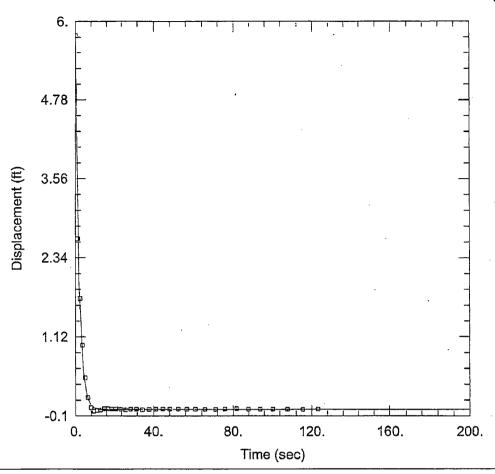
Aquifer Model: Confined

Kr = 20.57 ft/day

 $Kz/Kr = \overline{1.}$

Solution Method: KGS Model

Ss = 0.0003506 ft⁻¹



OW-735 L RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-735 L Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 87. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-735 L)

Initial Displacement: 5.779 ft

Static Water Column Height: 110.4 ft

Total Well Penetration Depth: 110. ft

Screen Length: 17.7 ft Well Radius: 0.25 ft

Casing Radius: 0.083 ft

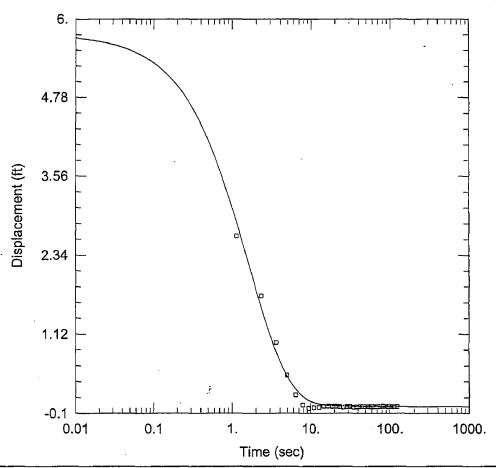
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 42.01 ft/day

Le = 0.1 ft



OW-735 L RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: Turkey Point Client: BECHTEL Project: 6468-07-1950 Location: Turkey Point Test Well: OW-735 L Test Date: 5-20-08

AQUIFER DATA

Saturated Thickness: 87. ft

WELL DATA (OW-735 L)

Initial Displacement: 5.779 ft Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110.4 ft

Screen Length: 17.7 ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined

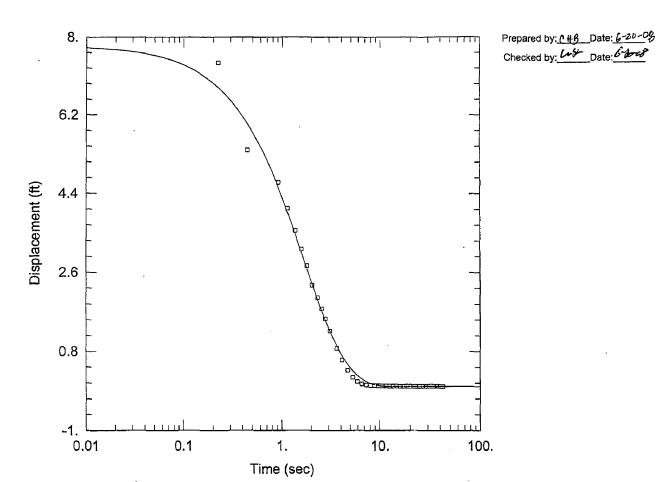
Solution Method: KGS Model

Kr = 32.05 ft/day $= 2.446E-6 ft^{-1}$

Kz/Kr = 1.

#MACTEC

Project Name: TPCOL	(2 468-ct. Project Number:	7-1950 . Page	
client: Bech Fel	Contractor: MACTEC		
Location: 0W-802U	MACTEC Rep: Kin Chals.	-Smith Date: 05%	20,08
UNITS			4
Length	Fest		
Time	Minutes	<u> </u>	
Well Data	F	- ind sticker from:	9.5. =3.531.
Static Water Level	4.60 feet From	Toe	
Total Well Depth	29.11 feet From	Toe	•
Static Water Column Height (H)	feet ·		
	Background	Falling Head	Rising Head
Observed Initial Displacement (Hg)	NA NA		·
Saturated Thickness (b)	feet		
Conductivity Anisatropy (Kv/Kh)	Assume 1 to 1	, , , , , , , , , , , , , , , , , , ,	
Depth to Top of Well Screen (d)			
Length of Well Screen (L)	10 feet		
Radius of Well Casing (rc)	0.083 feet		
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)			
Radius of Boring (rsk) Skin Effect	0.083 feet	. ·	
	Mini troll transol	second cil	
Probe Serial Number	Expires 4/29/09.	Level troll	
	Sn:118478	. Wins	iti.
Slug Data	USED preumo	tic. Shop to p	afan Jest
Length :			
weight			
Diameter		·	
Slug Test File	Background	Falling	Rising
Flie Name	0W-802UBG		- w-eaur
Start Time	16:31:44		16.36.37
End Time	6:33:1618		1 10.57,20
Notes			
•			
ם ה	·		



OW-802 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950
Location: Turkey Point COL
Test Well: OW-802 U
Test Date: 5/20/2008

AQUIFER DATA

Saturated Thickness: 25.8 ft

WELL DATA (OW-802 U)

Initial Displacement: 7.799 ft

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.8 ft

Screen Length: 17. ft Well Radius: 0.25 ft

SOLUTION

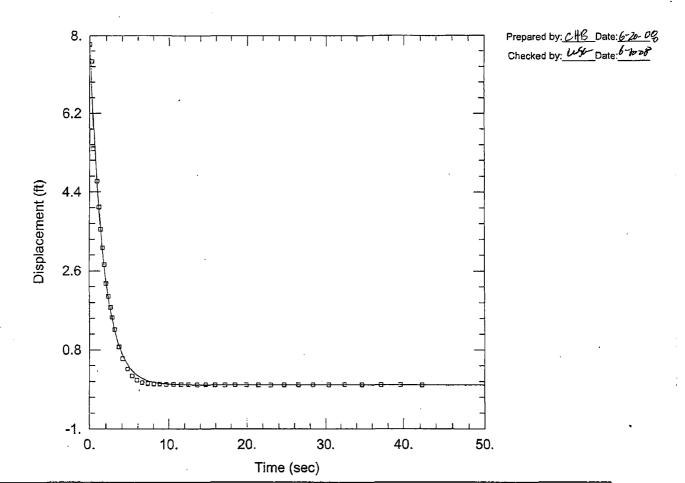
Aquifer Model: Unconfined

Kr = 41.06 ft/day

Kz/Kr = 1.

Solution Method: KGS Model

Ss = $3.704E-12 \text{ ft}^{-1}$



OW-802 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-802 U Test Date: 5/20/2008

AQUIFER DATA

Saturated Thickness: <u>25.8</u> ft Anisotropy Ratio (Kz/Kr): <u>1.</u>

WELL DATA (OW-802 U)

Initial Displacement: 7.799 ft
Total Well Penetration Depth: 27 ft

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.8 ft

Screen Length: 17. ft Well Radius: 0.25 ft

SOLUTION

Aquifer Model: <u>Unconfined</u>

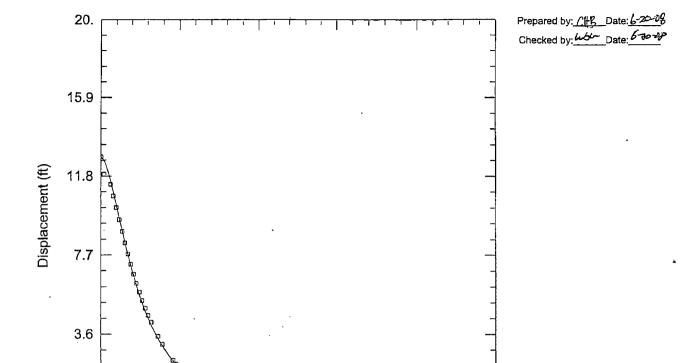
K = 31.9 ft/day

Solution Method: Springer-Gelhar

Le = 1.8 ft

MACTEC

Project Name: TPCd	CACO-O- Project Number	7-1950 Page of	
Client: Bechtel	Contractor: MACTEC		
Location: . O(L) - Crry I	MACTEC REP: KinChels	Said Date: 05/2	0 m
UNITS	1 trimcherts	-shuffe	
Length	Feet	. . .	
Time	Minutes		
Well Data		me sticky = 3.45	
Static Water Level	3.06 feet From	LTOC	
Total Well Depth	112,35 feet from	-toc	h.
Static Water Column Height (H)	feet		
	Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	NA NA		
Saturated Thickness (b)	feet		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1	·	
Depth to Top of Well Screen (d)		·	
Length of Well Screen (L)	feet feet		
Radius of Well Casing (rc)	0.083 feet		
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)			
Radius of Boring (rsk) Skin Effect	0.083 feet		
	Mine troll trans	wor caubatal	1/29/00, EXP +/29/09/
Probe Serial Number	50:118478	loud Toll (D)	700
		winstu	•
Slug Data	USED pheumas	tic Sug to po	fam lest.
Length ·		<u> </u>	
weight			
Diameter *			
Slug Test File	Background	Failing	Rising
File Name -	1000 CO21 BG	<u>UA</u> _	OW-BOILR
Start Time	Hy 8-20-08		17:15:19
End Time			17:15:45
Notes			1 ,
•			
	<u> </u>		



OW-802 L RISING HEAD TEST 5-20-08

Time (sec)

18.

12.

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

-0.5

0.

Test Well: OW-802 L Test Date: 5/20/2008

AQUIFER DATA

Saturated Thickness: 88. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-802 L)

Initial Displacement: 12.8 ft

Total Well Penetration Depth: 110. ft

6.

Static Water Column Height: 110.2 ft

24.

30.

Screen Length: 17. ft

Casing Radius: 0.083 ft

Well Radius: 0.21 ft

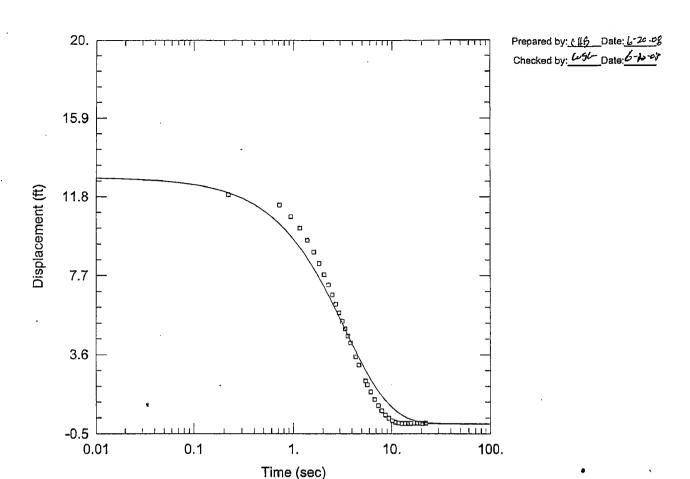
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 23.28 ft/day

Le = 58.98 ft



OW-802 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Weil: OW-802 L Test Date: 5/20/2008

AQUIFER DATA

Saturated Thickness: 88. ft

WELL DATA (OW-802 L)

Initial Displacement: 12.8 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110.2 ft

Screen Length: 17. ft

Well Radius: 0.21 ft

SOLUTION

Aquifer Model: Confined

= 30.99 ft/day

 $Kz/Kr = \overline{1}$.

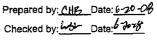
Kr

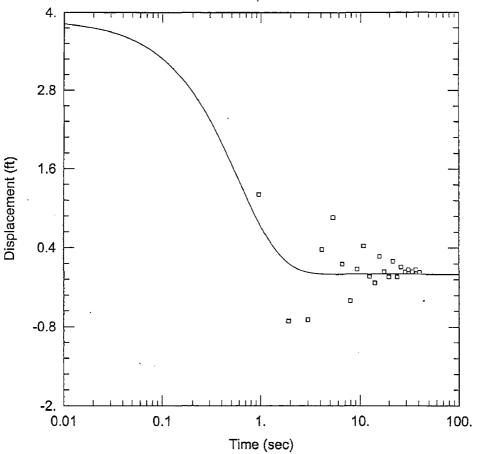
Solution Method: KGS Model

 $= 1.26E-20 \text{ ft}^{-1}$ Ss

MACTEC

Project Name: Tukey Point COL	6468071950	Page1_ o	<u></u>		
Client: Bechtel	Contractor: MACTEC	ow	- 805U		
Location: Homestead, FL	MACTEC Rep: Kin Chart				
UNITS					
Length	Feet				
Time	Minutes				
Well Data	St	10kup = 3,11 From	19,5.		
Static Water Level	3.00 feet from	-Toc.	<u> </u>		
Total Well Depth	33.85 feet From	u ToC			
Static Water Column Height (H)	feet		· ·		
	Background	Falling Head	Rising Head		
Observed Infliat Displacement (H ₀)	NA				
Saturated Thickness (b)	feet	18-28 5 LEGA	-w		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1	12 TOL Sun			
Depth to Top of Well Screen (d)			·		
Length of Well Screen (L)	(C) feet				
Radius of Well Casing (rc)	0.083 feet				
Radius of Screen (rw)	0.083 feet		· · · · · · · · · · · · · · · · · · ·		
Radius of Probe (req)			دور - منیتین حافظ که خان به روستان و اختیان کرد منتینی که باشد. و		
Radius of Boring (rsk) Skin Effect	0.083 feet	ر وجني يو م يناند سير س ند سر ۱۰ ودن اميناندست ميزادد وم د	بدو و والطبيون و دو يون سواون منسي ۱۹۹۹ و دونسون سوست		
reduce of boning (rak) Okta Elicot		Solinal esobe. (alibrated 4 balos		
Probe Serial Number	Expires 4/20/09	fevel froll	720		
TODE SCHOLINGINGS		JINSITU			
Sing Data		c slug to per	Form Jo A		
Length		X P			
*			and the second s		
weight					
Diameter Slug Test File	Background	Falling	Rising		
File Name	0W-805UBG	NA	OW-EUSUR		
Start Time	03:35:15		03:48:34		
End Time	03:37:21		03:50:05		
Notes			0		
	2rd Kory D.	2 00 -805 U	<u>K</u>		
	03.54:32				
	WX12600 03:55:29				
		ر المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المر المراجع المراجع			
Rev 0					





OW-805 U RISING HEAD TEST 6-06-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-805 U Test Date: 6/06/2008

AQUIFER DATA

Saturated Thickness: 32.3 ft

WELL DATA (0W-805 U)

Initial Displacement: 3.886 ft

Total Well Penetration Depth: 30. ft

Casing Radius: 0.083 ft

Static Water Column Height: 29.8 ft

Screen Length: 17. ft

Well Radius: 0.25 ft

SOLUTION

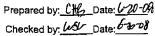
Aquifer Model: Unconfined

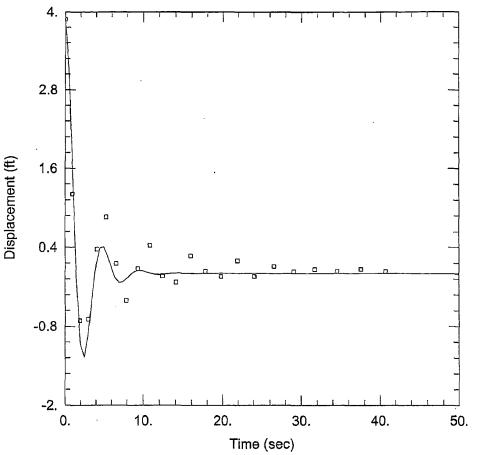
Kr = 101.7 ft/day

 $Kz/Kr = \overline{1.}$

Solution Method: KGS Model

Ss = $3.077E-12 \text{ ft}^{-1}$





OW-805 U RISING HEAD TEST 6-06-08

PROJECT INFORMATION

Client: Rechtel

Client: Bechtel

Project: <u>6468-07-1950</u> Location: Turkey Point COL

Test Well: <u>OW-805 U</u> Test Date: <u>6/06/2008</u>

AQUIFER DATA

Saturated Thickness: 32.3 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (0W-805 U)

Initial Displacement: 3.886 ft

Total Well Penetration Depth: 30. ft

Casing Radius: 0.083 ft

Static Water Column Height: 29.8 ft

Screen Length: 17. ft

Well Radius: 0.25 ft

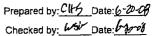
SOLUTION

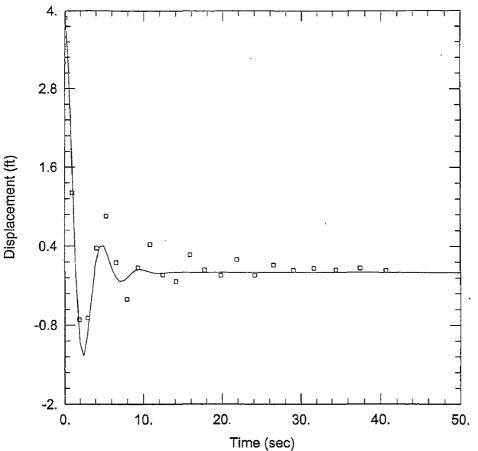
Aquifer Model: Confined

Solution Method: Butler

K = 136.4 ft/day

Le = 16.61 ft





OW-805 U RISING HEAD TEST 6-06-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950

Location: Turkey Point COL

Test Well: OW-805 U Test Date: 6/06/2008

AQUIFER DATA

Saturated Thickness: 32.3 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (0W-805 U)

Initial Displacement: 3.886 ft

Static Water Column Height: 29.8 ft

Total Well Penetration Depth: 30. ft

Screen Length: 17. ft

Casing Radius: 0.083 ft

Well Radius: 0.25 ft

SOLUTION -

Aquifer Model: Unconfined

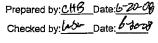
Solution Method: Springer-Gelhar

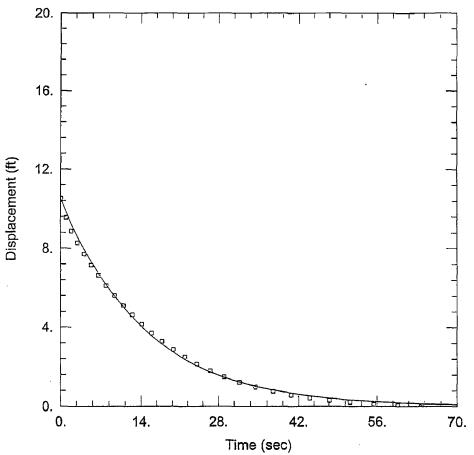
K = 107.1 ft/day

Le = 16.61 ft

MACTEC

Project Name: Tukey Point COL	6468071950	Page 1	of 1
Client: Bechtel	Contractor: MACTEC	ow.	-805L
Location: Homestead, FL	MACTEC Rep: Kim Chalbe	nut Date: 06,	06 <u>0</u> 8
UNITS		<u></u>	
Length	Feet		
Time	Minutes		
Well Data		Sticker = 2,91	Formegs.
Static Water Level	3.191 feet 5000	CTOC	
Total Well Depth	97,9 feet from	LTOC	
Static Water Column Height (H)	feet ·		
	Background	Falling Head	Rising Head
Observed Initial Displacement (H _o)	NA ·		
Saturated Thickness (b)	feet	ج	and 80 - 97.9
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1	85-95	
Depth to Top of Well Screen (d)	·		
Length of Well Screen (L)	O feet		•
Radius of Well Casing (rc)	0.083 feet		
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)			
Radius of Boring (rsk) Skin Effect	0.083 feet		
	Mini Troll Tran	isdua & probe	Calibrated 4/29/08.
Probe Serial Number	Expires 9/29/09.	level froll B	Californited 4/29/08.
	Sn: 118478		
Slug Data	USED prevnão		refin Lest
Length			
weight			
Diameter			
Slug Test File	Background, 2 Co 0	Falling	146-6-08 RISING 8056R
File Name	OW-805150	08 NA	ow-8084
Start Time	. 03.85.15		04:16:39
End Time W6-606	03:57:21		04:17:43
Notes	04:09:39		
•			
	2ng 0w-805		
	04,24,09		
Rev 0			





OW-805 L RISING HEAD TEST 6-06-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel Project: 6468-07-1950

Location: Turkey Point COL

Test Well: OW-805 L Test Date: 6/06/2008

AQUIFER DATA

Saturated Thickness: 67.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-805 L)

Initial Displacement: 10.51 ft

Total Well Penetration Depth: 97. ft

Casing Radius: 0.083 ft

Static Water Column Height: 97.51 ft

Screen Length: 17. ft

Well Radius: 0.21 ft

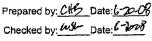
SOLUTION

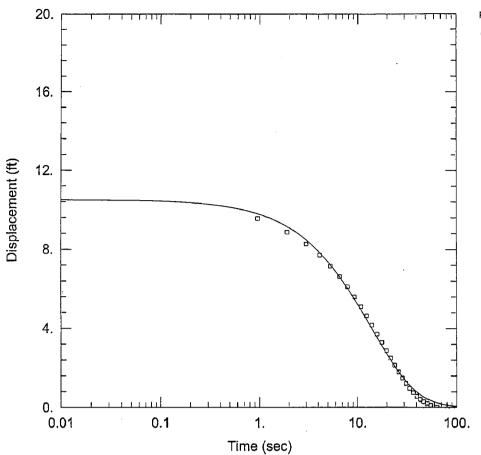
Aquifer Model: Confined

Solution Method: Butler

K = 5.269 ft/day

Le = 0.1 ft





OW-805 L RISING HEAD TEST 6-06-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: <u>OW-805 L</u> Test Date: <u>6/06/2008</u>

AQUIFER DATA

Saturated Thickness: 67.5 ft

WELL DATA (OW-805 L)

Initial Displacement: 10.51 ft

Total Well Penetration Depth: 97. ft

Static Water Column Height: 97.51 ft

Screen Length: 17. ft

Well Radius: 0.21 ft

SOLUTION

Aguifer Model: Confined

Casing Radius: 0.083 ft

Solution Method: KGS Model

Kr = 5.936 ft/day

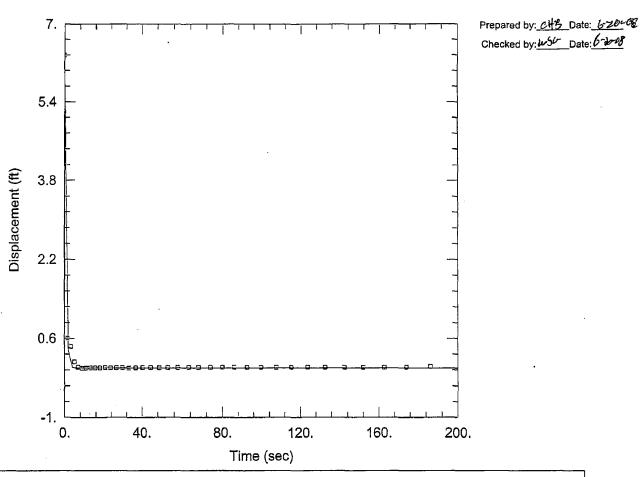
Ss = $1.481E-12 \text{ ft}^{-1}$

Kz/Kr = 1.

MACTEC

Project Name: TR COL	Desired Number			į ·			
Proling.	Project Number:	Page	v of				
	Contractor: MACTEC		3 1		·		
Location: 0W-809U	MACTEC Rep: Kyn Chato	MACTEC Rep: Kim Charle-Smith Date: 05,15,08					
UNITS							
Length	Feet				,		
Time	Minutes	· · · · · · · · · · · · · · · · · · ·			· .		
Well Data	11,01	e sticker=	3.83	1			
Static Water Level	1-0			· - · ·			
Total Well Depth	29.71 feet From				·		
Static Water Column Height (H)	25.03 feet From	9,3.	 ,	<u> </u>			
	Background	Falling Head		Risi	ng Head		
Observed Initial Displacement (Ho)	NA.	· · · · · · · · · · · · · · · · · · ·		·			
Saturated Thickness (b)	feat						
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1						
Depth to Top of Well Screen (d)		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•- •		•		
Langth of Well Screen (L)	feet						
Radius of Well Casing (rc)	0.083 feet		•		·		
Radius of Screen (rw)	0.083 feet						
Radius of Probe (reg)							
Radius of Boring (rsk) Skin Effect	0.083 feet						
	Mui Toll transder	iar Calibrate	1 4/20	100 811	24/29/10		
Darka Onial Markey	1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		- <u></u>	100 1 051	1.27401		
Probe Serial Number 50 10334-5							
1 160							
Slug Data Slug #	1/2/00/01	 	···	· ······	······································		
Length ·	65.438 inches						
weight	8.811 165.						
Diameter	1,662 inches		· · ·	·	·		
Slug Test File	Background	Falling		R	gnis		
File Name :	au-809UBG	<u>.0w-894</u>	F	<u>au-80</u>	9473-6-10		
Start Time	13:22:17	13:38:00	<u> </u>	3:5	56		
End Time	13:34:53	13,48,40	$2 \perp$	14:10	:44		
Notes	no Expertants	P ON TO	<u> </u>				
	Rema OW-80	UF @ 14:1	3:16	hcs.			
				······································	<u> </u>		
			· · · · · ·				

Rev 0							



OW-809 U FALLING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950
Location: Turkey Point COL
Test Well: OW-809 U

Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: <u>25.52</u> ft Anisotropy Ratio (Kz/Kr): <u>1.</u>

WELL DATA (OW-809 U)

Initial Displacement: 6.358 ft

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.52 ft

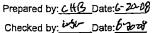
Screen Length: 14.4 ft Well Radius: 0.25 ft

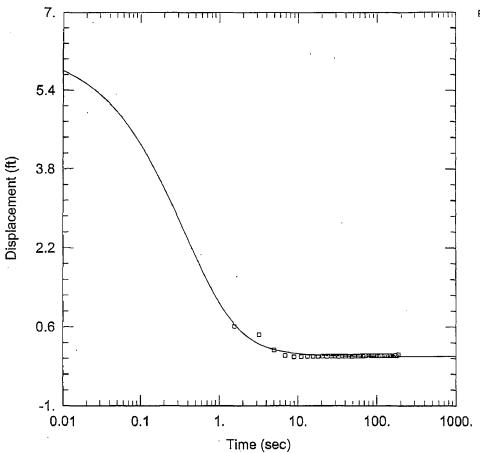
SOLUTION

Aquifer Model: Unconfined

Solution Method: Springer-Gelhar

K = 91.2 ft/day Le = 0.1 ft





OW-809 U FALLING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL Test Well: OW-809 U

Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 25.52 ft

WELL DATA (OW-809 U)

Initial Displacement: 6.358 ft

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.52 ft

Screen Length: 14.4 ft

Well Radius: 0.25 ft

SOLUTION

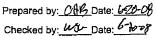
Aquifer Model: Unconfined

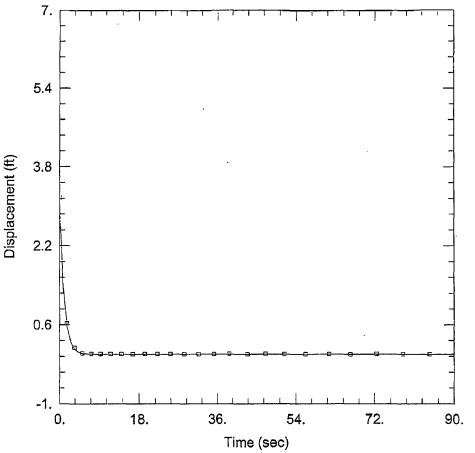
Kr = 102.9 ft/day

Kz/Kr = 1.

Solution Method: KGS Model

 $= 0.0003374 \text{ ft}^{-1}$





OW-809 U RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-809 U Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 25.52 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-809 U)

Initial Displacement: 3.175 ft

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.52 ft

Screen Length: 14.4 ft

Well Radius: 0.25 ft

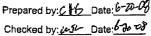
SOLUTION

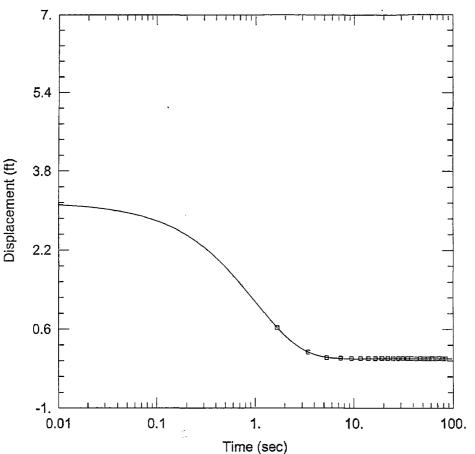
Aquifer Model: Unconfined

K = 60.67 ft/day

Solution Method: Springer-Gelhar

Le = 0.1 ft





OW-809 U RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950
Location: Turkey Point COL
Test Well: OW-809 U
Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 25.52 ft

WELL DATA (OW-809 U)

Initial Displacement: 3.175 ft

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.52 ft

Screen Length: 14.4 ft

Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined

Kr = 82.32 ft/day

Kz/Kr = 1.

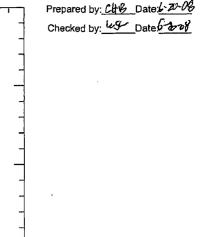
Solution Method: KGS Model

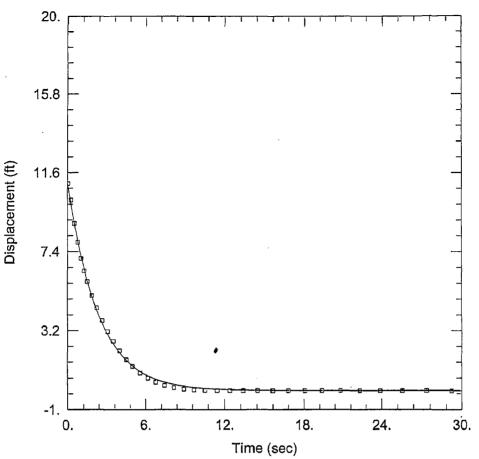
Ss = $2.789E-6 \text{ ft}^{-1}$

MACTEC

		(AlAm wer)	1
Project Name: TP C-OL	Project Number:	(AIB-07-FISO Page of	1
Client: Bechtel	Contractor: MACTEC		
Location: . ow -8094	MACTEC Rep: Kim Charles	- Smoth Date: 05/2	<u>0,08</u>
UNITS			
Length	Feet		
Time	Minutes		
Well Data		Final Stickup = 3:8	b3' .
Static Water Level	4.72 feet From		
Total Well Depth	29.71 feet From		4.
Static Water Column Height (H)	feet		
	Background	Failing Head	Rising Head
Observed inklal Displacement (H ₀)	NA.		
Saturated Thickness (b)	feet	namental and the property of t	- 1 (Millionnin, (Million (144))
Conductivity Anisolmpy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)		· · · · · · · · · · · · · · · · · · ·	
Length of Well Screen (L)	fest		
Radius of Well Casing (rc)	0,083 feet		
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)			
Radlus of Boring (rsk) Skin Effect	0.0B3 feet	····	
	Mini Troll Transde	ecopolae calibrated	- 1/20/08 EXP+/29/09
Probe Serial Number	5n: 118478	lovel tralle	F00
		Winster	• •
Siug Data	USED Preuma	te slug top	erfamillet.
Length			
weight		•	
Diameter			
Sing Test File	Background	Falling	Rising
File Name	ow-bourse	NA	0W-894R
Start Time	09;24:23		09:33:23
End Time	09:27:32		1 09:33:54
Notes			

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Rev 0			





OW-809 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: <u>OW-809 U</u> Test Date: <u>5/20/2008</u>

AQUIFER DATA

Saturated Thickness: <u>25.48</u> ft Anisotropy Ratio (Kz/Kr): <u>1.</u>

WELL DATA (OW-809 U)

Initial Displacement: 11.02 ft
Total Well Penetration Depth: 27

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.48 ft

Screen Length: 14.4 ft Well Radius: 0.25 ft

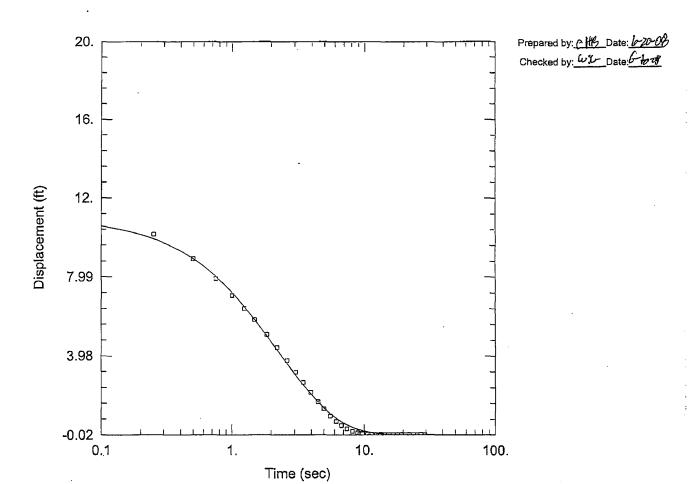
SOLUTION

Aquifer Model: Unconfined

K = 26.86 ft/day

Solution Method: Springer-Gelhar

Le = 1.028 ft



OW-809 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-809 U Test Date: 5/20/2008

AQUIFER DATA

Saturated Thickness: 25.48 ft

WELL DATA (OW-809 U)

Initial Displacement: 11.02 ft

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.48 ft

Screen Length: 14.4 ft

Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 35.94 ft/day

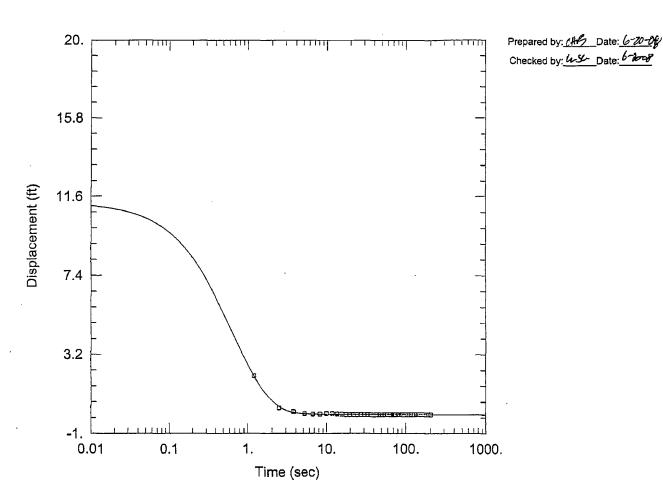
Ss = $4.032E-19 \text{ ft}^{-1}$

 $Kz/Kr = \overline{1.}$

#MACTEC

Project Name: TP COL	Project Number	r: Page	of			
client: beathel	Contractor: MACTEC					
Location: OW - BO9L	MACTEC Rep: Kim Chal	MACTEC Rep: Kim Chals South Date: 05/15/08				
UNITS	1 111101010	3 work				
Length	Feet					
	Minutes					
Time		ne Stickep=	3701			
Well Data	3.26 feet From	ctoc	2,72			
Static Water Level	109.92 feet Fran	<u> </u>	 		 .	
Total Well Depth	11 1	<u>toc</u>	·			
Static Water Column Height (H) 106/6	6 105-160 feet Fra	<u> </u>				
	Background	Falling Head		Rising I	ead	
Observed Initial Displacement (H ₀)	NA NA			•		
Saturated Thickness (b)	feet					
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1	18 18 18 18 18 18 18 18 18 18 18 18 18 1				
Depth to Top of Well Screen (d)						
Length of Well Screen (L)	10 feet					
Radius of Well Casing (rc)	0.083 feet					
Radius of Screen (rw)	0.083 feet					
Radius of Probe (reg)	•	·		:		
Radius of Boring (rsk) Skin Effect	0.083 feet				··· · ·-·	
		mini toll Pickel Cubriled 4/29/08. EXP. 4/29/09				
Probe Serial Number	Trousducer.	1.9	ر در در در در در در در در در در در در در		l	
Sn: 103345					- ····· ·	
-i 11 O	 					
Slug Data Slug #2	1.0 150	· ··· · · · · · · · · · · · · · · · ·			- · · ·	
ength	65,438 inch					
veight	8:811 ibs.					
Diameter	1.662 inches	 			·	
Slug Test File	Background	Falling		Rising	· · · · · · · · · · · · · · · · · · ·	
ile Name	0W-8091BG	au-801	<u> </u>	2W-80	3/LFR	
Start Time	12:36:37	12:46.0	}	12.59:4	<u>5.</u>	
nd Time	17:47.56	12:56:4	1	13:13:0	53	
lotes	Extended To	TO . 5181	apose	9.5.		
				·	- 4 	
					-	

·						
Rev 0	.					



OW-809 L FALLING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-809 L Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 88. ft

WELL DATA (OW-809 L)

Initial Displacement: 11.29 ft

Static Water Column Height: 110. ft

Total Well Penetration Depth: 110. ft

Screen Length: 19. ft

Casing Radius: 0.083 ft

Well Radius: 0.25 ft

SOLUTION

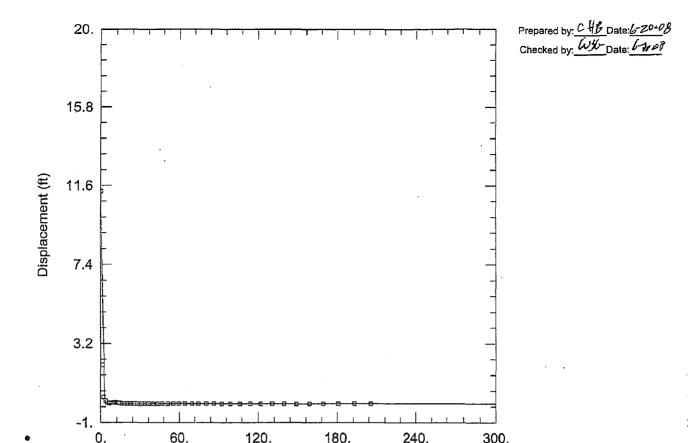
Aquifer Model: Confined

Solution Method: KGS Model

Kr = 108.6 ft/day

 $= 4.263E-12 \text{ ft}^{-1}$ Ss

Kz/Kr = 1.



OW-809 L FALLING HEAD TEST 5-15-08

Time (sec)

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-809 L Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 88. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-809 L)

Initial Displacement: 11.29 ft

Static Water Column Height: 110. ft

Total Well Penetration Depth: 110. ft

Screen Length: 19. ft

Casing Radius: 0.083 ft

Well Radius: 0.25 ft

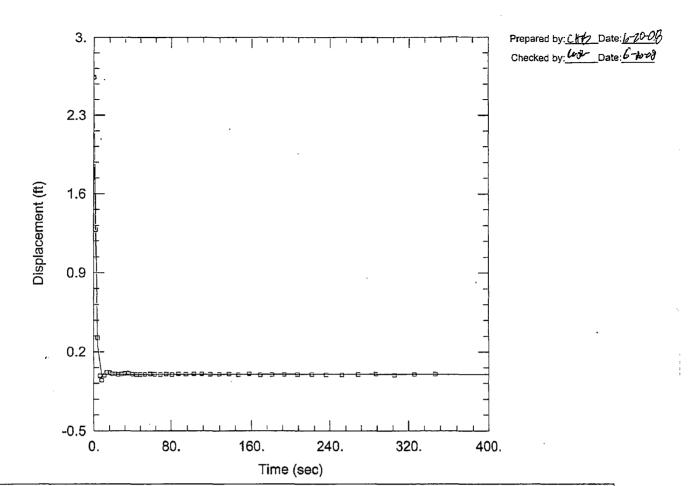
SOLUTION

Aquifer Model: Confined

Solution Method: Butler

K = 103.7 ft/day

Le = 0.1 ft



OW-809 L RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-809 L Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 88. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-809 L)

Initial Displacement: 2.64 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110. ft

Screen Length: 19. ft Well Radius: 0.25 ft

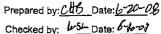
SOLUTION

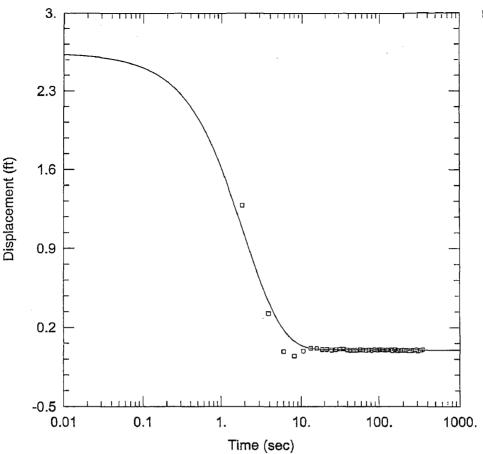
Aquifer Model: Confined

Solution Method: Butler

K = 33.43 ft/day

Le = 42.49 ft





OW-809 L RISING HEAD TEST 5-15-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-809 L Test Date: 5/15/2008

AQUIFER DATA

Saturated Thickness: 88. ft

WELL DATA (OW-809 L)

Initial Displacement: 2.64 ft

Total Well Penetration Depth: 110. ft

Casing Radius: 0.083 ft

Static Water Column Height: 110. ft

Screen Length: 19. ft

Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined

Kr = 36.57 ft/day

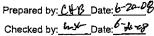
Kz/Kr = 1.

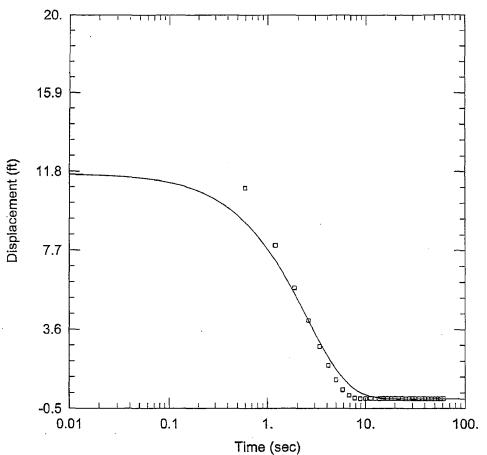
Solution Method: KGS Model

 $= 1.136E-12 \text{ ft}^{-1}$

MACTEC

Project Name: TPCOL	Project Number:	7-19:50 Page	of	· · ·
Client: Bechtel	Contractor: MACTEC			
Location: -0W - 8 2U	MACTEC Rep: Kin (Inch.	-Snuth Date:	051200B	•
UNITS				
Length	Feet	· .		
Time	Minutes			
Well Data	F	nil Strekep =	3:15 Fm	NS.5.
Static Water Level	4.55 feet Form	- Toc.		
Total Well Depth	30,30 feet From	_ToC_		i.
Static Water Column Height (H)	feet '			
	Background	Falling Head		Rising Head
Observed initial Displacement (H ₀)	NA NA		·	
Saturated Thickness (b)	feet	,		
Conductivity Anisotropy (Kv/Kh)	Assume 1 to 1			
Depth to Top of Weil Screen (d)				
Langth of Well Screen (L)	10 feet	,		
Radius of Well Casing (rc)	0.083 feet			
Radius of Screen (rw)	0.083 feet	·		
Radius of Probe (reg)	·			
Radius of Boring (rsk) Skin Effect	0.083 feet			
·	· Minitall transch	RR probe Ca	Marateal 4,	29/08 4/29/19
Probe Serial Number	Isn: 118478	level Troll	700	
· · · · · · · · · · · · · · · · · · ·		winsitu		
Slug Data	USED greimate	c slupto	Rafoni te	at.
Length		0		
weight'	·			
Diameter			,	
Slug Test File	Background	Falling		Rising
Flie Name	1 0W-812UBG1	<u>NA</u>	<u> </u>	BRUR
Start Time	16:05:53		16	13.19
End Time	16:08:21		16	14:31
Notes				
•		···		
	و و و و و و و و و و و و و و و و و و و		· · · · · · · · · · · · · · · · · · ·	
Rau N				





OW-812 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-812 U Test Date: 5/20/2008

AQUIFER DATA

Saturated Thickness: 25.45 ft

WELL DATA (OW-812 U)

Initial Displacement: 11.68 ft

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.45 ft

Screen Length: 16. ft

Well Radius: 0.25 ft

SOLUTION

Aquifer Model: <u>Unconfined</u>

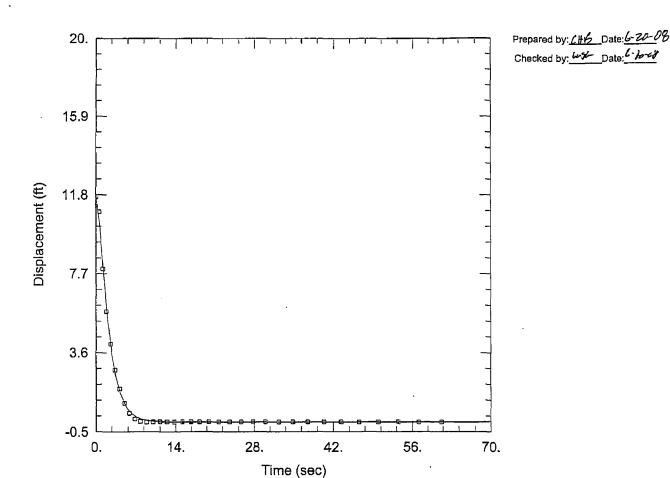
= 31.24 ft/day

Kz/Kr = 1.

Kr

Solution Method: KGS Model

Ss = $3.704E-20 \text{ ft}^{-1}$



OW-812 U RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-812 U

Test Date: 5/20/2008

AQUIFER DATA

Saturated Thickness: 25.45 ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-812 U)

Initial Displacement: 11.68 ft

Total Well Penetration Depth: 27. ft

Casing Radius: 0.083 ft

Static Water Column Height: 25.45 ft

Screen Length: 16. ft

Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Unconfined

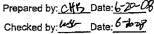
Solution Method: Springer-Gelhar

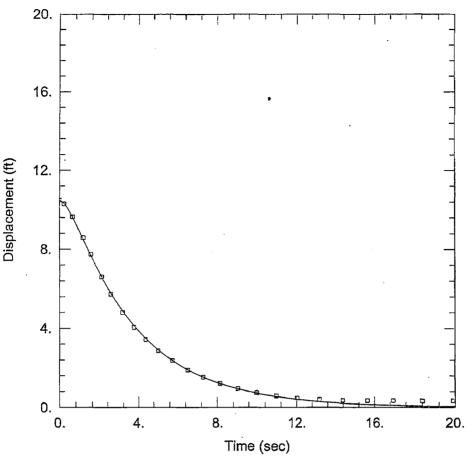
K = 24.49 ft/day

Le = 36.28 ft

MACTEC

Project Name: TPCOL	CACS-CT Project Number:	~ 1950 Page 0	
Client Bechel	Contractor: MACTEC		
Location: 0W-812L	MACTEC Rep: Kin Chalis	Smith Date: 051-	20,08
UNITS .			
Length	Feet		
Time	Minutes		
Well Data	Finds	Hotel from 5.5. =:	3.33' .
Static Water Level	3.01 feet		
Total Well Depth	111.75 feet	•	
Static Water Column Height (H)	faet		
·	Background	Falling Head	Rising Head
Observed Initial Displacement (H ₀)	NA ·		:
Saturated Thickness (b)	feet		
Canductivity Anisotropy (Kv/Kh)	Assume 1 to 1		
Depth to Top of Well Screen (d)			
Length of Wall Screen (L)	O feet		
Radius of Well Casing (ro)	0,083 feet	ر المعرب والمواقع المعرب والمواقع المعرب والمعرب والمعرب والمعرب والمعرب والمعرب والمعرب والمعرب والمعرب والمعرب	
Radius of Screen (rw)	0.083 feet		
Radius of Probe (reg)	·		·
Radius of Boring (rsk) Skin Effect	0.083 feet		
·	Translicer Menit	will probe chile	sted Harlos Euftrala
Probe Serial Number	Sn:118478	lovel Troll®	700
	•	Winsita	
Slug Data	USID preumati	c slucto rouf	wm flat
Length	٠	. 0	
weight .		•	
Diameter	·		
Slug Test File	Background	Falling	Rising
Flie Nama	100-812LBG	NA	0W-812LR
Start Time	15:52:14		15:58:28
End Time	15:55:13		15:58:52
Notes .			+
Day A			





OW-812 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-812 L Test Date: 5/20/2008

AQUIFER DATA

Saturated Thickness: 86. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (OW-812 L)

Initial Displacement: 10.48 ft

Total Well Penetration Depth: 109. ft

Casing Radius: 0.083 ft

Static Water Column Height: 109.3 ft

Screen Length: 15. ft

Well Radius: 0.25 ft

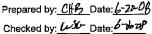
SOLUTION

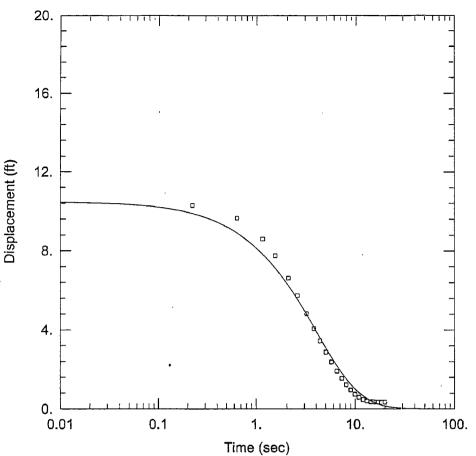
Aquifer Model: Confined

Solution Method: Butler

K = 21.01 ft/day

Le = 47.1 ft





OW-812 L RISING HEAD TEST 5-20-08

PROJECT INFORMATION

Company: MACTEC

Client: Bechtel

Project: 6468-07-1950 Location: Turkey Point COL

Test Well: OW-812 L Test Date: 5/20/2008

AQUIFER DATA

Saturated Thickness: 86. ft

WELL DATA (OW-812 L)

Initial Displacement: 10.48 ft

Static Water Column Height: 109.3 ft

Total Well Penetration Depth: 109. ft

Screen Length: 15. ft

Casing Radius: 0.083 ft

Well Radius: 0.25 ft

SOLUTION

Aquifer Model: Confined

Solution Method: KGS Model

= 21.2 ft/day Kr

 $= 1.163E-12 \text{ ft}^{-1}$ Ss

Kz/Kr = 1.