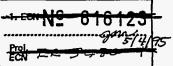
MAY 0 4 1995



## **ENGINEERING CHANGE NOTICE**

Page 1 of \_\_\_\_\_\_



2. ECN Category (mark one)	3. Originator's Name and Telephone No.	e, Organization, MSIN,	3a. USQ Req	uired?	4. Date
Supplemental [] Direct Revision	T. Ambalam, IC 376-6049		No		5/3/95
Change ECN [] Temporary []	5. Project Title/No.	/Work Order No.	6. Bldg./Sy	s./Fac. No.	7. Approval Designator
Standby [] Supersedure []	Hanford Facili	ties Tracer Study	315 V	Vater	NA NA
Cancel/Void		Water Treatment	1	tment	
	<del></del>	ility)		lity	40.01.100.0
	8. Document Numbers (includes sheet r	Changed by this ECN no. and rev.)	9. Related	ECN No(s).	10. Related PO No.
	WHC-SD-ER548	30-ER-001 REV 0	N N	A	NA
11a. Modification Work	11b. Work Package No.	11c. Modification Work	Complete		red to Original Condi- or Standby ECN only)
[] Yes (fill out Blk.	N/A	N/A		N/A	of Standby Lon Only)
[X] No (NA Blks. 11b, 11c, 11d)		Cog. Engineer Signatu	ıre & Date	Cog. Eng	ineer Signature & Date
12. Description of Change				·	
Changes in units o	f measurements a	nd references were	added.		
			•		
•					
	•				
13a. Justification (mark	•	r7	r 7		
Criteria Change []	Design Improvement	[X] Environmental	[]		ty Deactivation []
As-Found	Facilitate Const	[] Const. Error/C	mission []	Design	Error/Omission []
13b. Justification Detail See review comment					
See Leview Collillette	· .			•	
			<del></del>	<del>,</del>	
14. Distribution (include		f copies)			RELEASE STAMP
T. Ambalam (1)				OFFIC	HAL RELEASE
Central Files (	1)		•	1 1	BY WHO
OSTI (2	)			DATE	1.50 8 30
C—,				DAIE	MAY 0 4 1995
					The second section of the section of

# **DISCLAIMER**

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

## **RELEASE AUTHORIZATION**

**Document Number:** 

WHC-SD-ER5480-ER-001, Rev. 1

**Document Title:** 

Hanford Facilities Tracer Study Report (315 Water

Treatment Facility)

Release Date:

May 3, 1995

This document was reviewed following the procedures described in WHC-CM-3-4 and is:

## APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

May 3, 1995

TRADEMARK DISCLAIMER. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors.

This report has been reproduced from the best available copy. Available in paper copy and microfiche. Printed in the United States of America. Available to the U.S. Department of Energy and its contractors from:

U.S. Department of Energy Office of Scientific and Technical Information (OSTI)

P.O. Box 62

Oak Ridge, TN 37831 Telephone: (615) 576-8401

Available to the public from:

U.S. Department of Commerce

National Technical Information Service (NTIS) 5285 Port Royal Road

Springfield, VA 22161 Telephone: (703) 487-4650

A 1995	
1167 Str (36)	į

## SUPPORTING DOCUMENT

1. Total Pages 2195

		9/11-5/4/95
2. Title HANFORD FACILITIES TRACER STUDY REPORT (315 WATER TREATMENT FACILITY)	3. Number WHC-SD-ER5480-ER- 001	4. Rev No. 1 .
5. Key Words WATER TREATMENT-SURFACE WATER TREATMENT RULE- CONTACT TIME- TRACER STUDY- 300 AREA	6. Author Name: THIRUCHITR(TOM)  Signature Organization/Charge Code 57	AMBALAM  7200

#### 7. Abstract

Reported are the results and findings of a tracer study to determine contact time for the disinfection process of 315 Water Treatment Facility at 300 Area. The study utilized fluoride as the tracer and contact times were determined for two flow rates. Interpolation of data and short circuiting effects are also discussed.

8. RELEASE STAMP

OFFICIAL RELEASE BY WIND

DATE MAY 04 1995

## **RECORD OF REVISION**

(1) Document Number
WHC-SD-ER5480-ER001

Page 1

(2) Title

Hanford Facilities Tracer Study Report (315 Water Treatment Facility)

	CHANGE CONTROL RECORD		· · · · · · · · · · · · · · · · · · ·
3) Revision	(4) Description of Change - Replace, Add, and Delete Pages		zed for Release
	(7)	(5) Cog. Engr.	(6) Cog. Mgr. Date
l RS	Incorporate changes to units of measurements and add references for clarification	T. Ambalam T. Amtalu	R.L. Newell 5-4
			/
	•		
		-	
	•		
	•	,	•
,			
			··· · · · · · · · · · · · · · · · · ·
	-		

# ENGINEERING REPORT HANFORD FACILITIES TRACER STUDY REPORT, 315 WATER TREATMENT FACILITY (ID# 418408)

WORK ORDER ER5480

Prepared for
WASHINGTON STATE DEPARTMENT OF HEALTH
May 1995

For the U.S. Department of Energy Contract DE-AC06-93RL12359

Prepared by
ICF Kaiser Hanford Company
Richland, Washington

**ER5480ER** 

#### **ER5480ER**

## **ENGINEERING REPORT**

## **FOR**

HANFORD FACILITIES TRACER STUDY REPORT, 315 WATER TREATMENT FACILITY (ID# 418408)

## **WORK ORDER ER5480**

Prepared by

ICF Kaiser Hanford Company

Richland, Washington

Date

**Utilities** Engineering

MASTER

Date

- i -

Technical Author

# TABLE OF CONTENTS

I.	INTRO	DUCTION
II.	SUM	ARY 2
III.		SE 4
IV.	DESC	IPTION
	A.	PLAN OF STUDY 5
	B.	300 AREA FILTER FACILITY 7
		1. Test Setup
	C.	DISCUSSION OF RESULTS
V.	CON	USIONS AND RECOMMENDATIONS
· VI	REFE	ENCES 20

#### **DISCLAIMER**

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

## APPENDICES:

Appendix A. Calculation No. ER5480-G-007, "Contact Time in the 300 Area Filter Plant Determined From A Two Flow Tracer Test," Rev. 0, prepared by ICF Kaiser Hanford Company, March 1995.

Appendix B. Calculation No. ER5480-G-005, "Theoretical Detention

Time and Fluoride Injection Rate," Rev. 2, prepared by ICF

Kaiser Hanford Company, March 1995.

Appendix C. Calculation No. ER5480-G-004, "Fluoride Loss Due to
Addition of Alum," Rev. 0, prepared by ICF Kaiser Hanford
Company, November 1994

Appendix D. 315 Water Treatment Facility Layout

Appendix E. Washington State DOH Tracer Evaluation Work Sheet

## **ENGINEERING REPORT**

## HANFORD FACILITIES TRACER REPORT, 315 WATER TREATMENT FACILITY (ID# 418408)

## **WORK ORDER ER5480**

# I. INTRODUCTION

Historically, water from the Columbia River has been pumped from several locations to be used on the Hanford Nuclear Reservation for nuclear reactors, processing facilities, steam generation, fire protection, and drinking water.

Five surface water treatment facilities currently supply drinking water to various areas on the reservation which include the 183-N Water Treatment Facility (ID# 418532); the 183-K Water Treatment Facility (ID# 0177J); the 283-E Water Treatment Facility (ID# 41866V); the 283-W Water Treatment Facility (ID# 001004); and the 315 Water Treatment Facility (ID# 418408) that supplies sanitary water for the 300 Area.

The Surface Water Treatment Rule (SWTR), outlined in the 1986 Safe Drinking Water Act Amendments enacted by the EPA in 1989 and regulated by the Washington State Department of Health (DOH) in Section 246-290-600 of the Washington Administrative Code (WAC), stipulates filtration and disinfection requirements for public water systems under the direct influence of surface water. The SWTR disinfection guidelines require that each treatment system achieves

predetermined inactivation ratios. The inactivation by disinfection is approximated with a measure called CxT, where C is the disinfectant residual concentration and T is the effective contact time of the water with the disinfectant.

According to WAC 246-290-636, "Determination of Disinfectant Contact Time," the water purveyor shall use tracer studies or empirical methods to determine T. Empirical methods to calculate T may not be used unless the system components are demonstrated to have configurations analogous to components on which tracer studies have been conducted and results have been documented. The CxT calculations for the Hanford water treatment facilities were derived from the total volume of the contact basin(s). In the absence of empirical data to support CxT calculations, the DOH determined that the CxT values used in the monthly reports for the water treatment facilities on the Hanford Site were invalid and required the performance of a tracer study at each facility. In response to that determination, a tracer study will be performed to determine the actual contact times of the facilities for the CxT calculations. The facilities will follow.

# II. SUMMARY

A tracer study at two flow rates (Q peak and 0.90\* Q peak) was performed at the 315 Water Treatment Facility in accordance with the Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems using Surface Water Sources (Guidance Manual), and the Disinfection

- 2 - 05/95

Contact Time Study Plan (CTS Plan), (ref 1 and 2). The CTS Plan was submitted and approved by the DOH (ref 3).

The actual detention times at each flow were determined. Table 1 shows the results of the two tracer tests.

TABLE 1. Results of Two Tracer Tests at the 315 Water Treatment Facility								
Target Flow	Average Test	Theoretical	Actual	% Tracer				
	Flow	Residence	Residence	Recovered				
		Time	Time $(T_{10})$					
		(T)						
2,400 gpm	2,380 gpm	178 min	102 min	85%				
2,160 gpm	2,127 gpm	199 min	167 min	45%				

The study results were evaluated to provide a means for determining the actual residence time ( $T_{10}$ ) at any flow experienced at the 315 Water Treatment Facility when it is operating under a configuration similar to the configuration during the tracer tests. Figure 1 is a graph that was developed from the 315 Water Treatment Facility tracer study results.

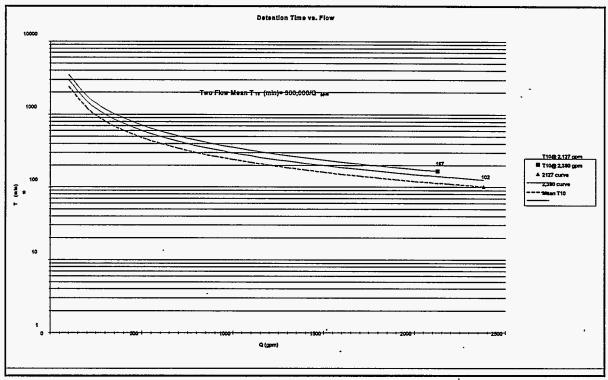


Figure 1: 315 Filter Facility T<sub>10</sub> determination for any flow (Appendix A, p. A-C-13)

## III. PURPOSE

The objective of this report is to outline the results of tracer studies at the 315 Water Treatment Facility, answer potential questions, give the facility operators a tool for determining the actual detention time experienced at the facility under various flow conditions, and fulfill the DOH requirement for a Tracer Study Evaluation Work Sheet. The worksheet is contained in Appendix E.

In order to provide the tool, a tracer is tracked in the treatment train and the results are analyzed in accordance with the Guidance Manual. The Guidance

- 4 - 05/95

Manual requires at least one tracer test at a flowrate of no less then 91% of the highest flow experienced at that section (ref 1, p. C-2). By conducting tracer studies, the detention time for corresponding peak hourly flow conditions can be determined. When tracer tests are performed at peak flows, they provide a conservative estimate in CxT calculations for flowrates less than or equal to the tracer test flowrate (ref 1, p. C-2).

If the tracer tests are not performed, the facilities will not be in compliance with the SWTR and there is an inability to ensure that sufficient contact time has occurred for disinfection prior to delivery of the water to the customers.

## IV. DESCRIPTION

#### A. PLAN OF STUDY

The tracer studies are proposed to meet the requirements of WAC 246-290-636, "Determination of Disinfection Contact Time." The 315 Water Treatment Facility tracer study was performed in accordance with the Guidance Manual and the CTS Plan.

The tracer study flowrates are based on the peak hourly flows recorded on the SWTR CxT Determination Logsheets that are submitted to the DOH. System demand in the future will vary due to source reduction and other water conservation measures scheduled for implementation on the Hanford Reservation. The future peak flows are expected to be less than the current flowrates at the treatment facility.

A tracer study using sodium fluoride was performed on the treatment train typically used at the facility for final disinfection. Of the two most common methods of tracer addition employed in water treatment evaluations, the step-dose method was selected because the resulting normalized concentration versus time profile can be used directly to determine the detention time ( $T_{10}$ ) required for calculating CxT. The step-dose method entails introduction of a tracer chemical at a constant dosage and monitoring for that tracer at the desired end point. Fluoride was chosen as the tracer chemical because it is approved for potable water use and is not normally added for water treatment on the Hanford Reservation.

Immediately prior to the test, the background fluoride concentration was determined and recorded. Appropriate fluoride injection flowrates were calculated after the predetermined flowrates had been established in the facility. The sodium fluoride was injected with a Liquid Metronics Injector® (LMI) Fluoride saturator and an electronic metering pump. The sodium fluoride was injected as close to the point of chlorination as possible. The tracer was monitored prior to the first service connection with a HACH DR/700 Colorimeter at a point downstream of the export pump.

Based on fluoride loss due to alum precipitation and raw water residual concentration, fluoride was added at a calculated dosage that would result in a residual concentration of approximately 1.5 mg/L in the

- 6 - 05/95

facility effluent (ref 1 and Appendix C, p. C-3). Recommended fluoride concentrations as low as 1.0 to 1.5 mg/L are practical when the raw water fluoride level is not significant. The duration for fluoride addition was selected to be twice the theoretical detention times as suggested by Hudson (ref 4).

Sampling occurred at 10 minute intervals until the tracer concentration in the effluent exceeded the background levels. Once a concentration change was observed, sampling was performed at 2 - 5 minute sampling intervals until a steady-state concentration was reached, or twice the theoretical detention time had elapsed which provided data for a well-defined plot of tracer concentration versus time. At this point, the tracer addition was discontinued. The receding tracer concentration was monitored at reasonable sampling intervals based on overall detention. Tracking the receding curve allowed for calculation of tracer recovery. Monitoring of the tracer was discontinued when 90% of the tracer was accounted for or the fluoride levels reached background. The water level, flow, and temperature were recorded during the test.

#### B. 300 AREA FILTER FACILITY

The 300 Area Water Treatment Facility (ID# 418408) pumps raw water from the Columbia River. The raw water is treated and supplied to various process and domestic users throughout the 300 Area. The water system distribution piping in the 300 Area provides potable and process water to less than 214 buildings. The water system consists of a river

- 7 - 05/95

water pumphouse, the water treatment facility, the water distribution system, and two above-ground water storage tanks. The tanks are used as storage vessels to supply potable water to the distribution system for a short period of time during an emergency. During emergencies and maintenance outages, the City of Richland can supply potable water to the 300 Area.

The river water pumps supply raw water to the water treatment facility and fish study facilities in the Pacific Northwest Laboratory Life Sciences Building 331. The river water pumphouse (312 Building) contains two motor-driven vertical turbine pumps and a smaller emergency (biology) pump. The two primary pumps are operated alternately at one-week intervals. Each of the two river water pumps is rated at 10,000 gal/min.

The 315 Water Treatment Facility is supplied water at approximately 70 psi through a 10-inch line branched from the 24-inch raw water line downstream of the river pumps. Water treatment consisting of coagulation, chlorination, sedimentation, and filtration is accomplished at the 315 Water Treatment Facility. A layout of the facility is contained in Appendix D. Coagulation occurs at the flash mix chamber which contains two upright mixing baffles where the water mixes with alum. At the exit of the chamber, chlorine is injected to deter algae formations, disinfect the water, and provide residual chlorine in the distribution system. The flash mixer overflows a weir into a

- 8 - 05/95

distribution flume. The flume has four 14-inch openings in the bottom, spaced to supply water to the center of the entrance of four sedimentation basins. The water strikes stilling baffles and continues out into the sedimentation basins.

At the discharge of the sedimentation basins, the clarified water overflows a weir into the filter influent flume. Water from this flume is fed to the four filter entrance gullets. Preastol 2515, an anionic acrylamide copolymer, is sometimes added at the gullets to aid in filtration when high turbidity conditions exist in the Columbia River. The four filters are designed for a flow of 6 gpm per square foot. Water flows from the filter influent gullet into two troughs over each filter. The water overflows the troughs onto the top of the filter bed. From the bottom of the filter, the water flows into the clearwell. The clearwell has a capacity of approximately 70,000 gallons. Though rarely practiced, chlorine can be fed directly to the clearwell from each of the filter inlets. Two clearwell pumps supply filtered water to the 300 Area distribution grid.

The 315 Water Treatment Facility typically experiences flows less than those maintained during the tracer tests, as shown in Table 2. Frequently, when lower flows are experienced in the facility, one or two filters will be removed from service.

- 9 - 05/95

TABLE 2.	Seasonal Cond	litions at the 31	5 Water Treatm	ent Facility
	Winter	Spring	Summer	Fall
Maximum Temp (C°)		15.3	24.0	20.2
Average Temp (C°)	6.2 .	10.6	19.8	13.2
Average Flow (gpm)	763	802	1,112	913

## 1. TEST SETUP

The layout of the 315 Water Treatment Facility in Appendix D shows the four basins and filters that were utilized during the tests. In accordance with the CTS Plan, the background fluoride concentration was determined by monitoring prior to beginning the tests at the sampling point where the disinfectant residual is measured for CxT calculations. An onsite analysis was performed using a HACH Colorimeter and fluoride reagent packs (SPADNS). Background monitoring was performed for 30 minutes at 5 minute intervals. The background was determined to be 0.4 mg/l during all tracer tests in the 315 Water Treatment Facility.

When the desired flowrate (2,400 gpm or 2,160 gpm) was established, the fluoride feed supplied from a LMI Model

28850 Fluoride Saturator was energized and left at a constant rate for the duration of the test. Fluoride was added at the exit of the mixing chamber leading to the sedimentation basins and was monitored from a sample tap off of the discharge line from the clearwell. The tracer study was performed on the treatment train starting at the exit of the flash mix chamber, and included four sedimentation basins, four filters, and the clearwell. The combined volume of these components is approximately 424,000 gallons (Appendix B, p. B-3).

During the 2,400 gpm test on March 6, 1995 (Test 1), tracer was added at a rate of 620.8 ml/min for 6 hrs. The fluoride injector was then de-energized and the receding curve was tracked for an additional 4 hrs and 55 min until the tank storage space was exhausted and the artificially elevated flowrate could no longer be maintained.

A 2,160 gpm tracer test (Test 2) was attempted at the 315 Water Treatment Facility on March 10, 1995. The results of the test were not consistent with estimates of fluoride residual. Therefore, a retest was scheduled.

During the 2,160 gpm test on March 23, 1995 (Test 3), tracer was added at a rate of 580 ml/min for 6 hrs and 35 min. The

- 11 - 05/95

fluoride injector was de-energized and the receding curve was tracked for an additional 5 hrs and 5 min until background fluoride concentrations were detected again.

## C. DISCUSSION OF RESULTS

A two-flow tracer study (Q peak and 0.90\* Q peak) was performed at the 315 Water Treatment Facility in the 300 Area, and the actual detention time at those flows was determined. Table 3 shows a summary of the data taken during the two reliable tracer tests and the corresponding results.

TABLE 3. 315 Water Treatment Facility Step-Dose Method Sodium Fluoride Tracer Study						
Test Date	March 6, 1995 (Test 1)	March 23,1995 (Test 3)				
Target Flow	2,400 gpm	2,160 gpm				
Average Test Flow	2,380 gpm	2,127 gpm				
Average Clearwell  Depth	10.8 ft	10.8 ft				
Normal Clearwell  Depth	10.8 ft	10.8 ft				
Average Water Temp	5.8 °C	7.9 ℃				
Normal Seasonal Temp	6.2 °C	. 6.2 °C				

I I

	TABLE 3 -continued	
Background Tracer	0.4 mg/l	0.4 mg/l
Levels		
Tracer Dose	1.21 mg/l	1.27 mg/l
Alum Dose	20 mg/l	25 mg/l
Expected Tracer Loss	0.1 mg/l	0.15 <b>-</b> 0.2 mg/l
Due to Alum		
Expected Maximum	1.51 mg/l	1.47 mg/l
Detected Tracer		
Residuals		
Actual Maximum	1.5 mg/l	1.2 mg/l
Detected Tracer		
Residuals	·	
Injection Period	6 hrs	6.6 hrs
Sampling Period	10.9 hrs	11.7 hrs
Theoretical	178 min	199 min
Residence Time (T)		
Actual Residence	. 102 min	167 min
Time (T <sub>10</sub> )		
% Tracer Recovered	85%	45%

Source: Appendix A.

The March 6, 1995 tracer test (Test 1) appears to be a textbook example of the step-dose method tracer test. The flowrate during the peak flow test averaged 2,380 gpm (-0.8% of the target flow). There was apparently some short circuiting with the actual residence time being approximately 60% of theoretical. However, some channeling effect (short circuiting) can be expected in the long sedimentation basins that have no baffling. The clearwell is a large single basin that may experience some effects similar to the sedimentation basins. These slight short circuiting problems do not appear to be extensive. The tracer mass recovery was calculated at 85% and an additional 10% can be attributed to alum loss (see Appendices A and C). The calculated maximum tracer residual of 1.5 mg/l was obtained during effluent testing. Figure 2, a graph of relative concentration versus time, shows that the tracer approached a steady state level before the end of the tracer addition (twice the theoretical detention time).

The data was evaluated numerically and the correlation coefficient indicated a good statistical fit (0.95). Therefore, T<sub>10</sub> was determined as the solution to an equation based on the straight-line parameters to a linear regression analysis of the tracer test data instead of an "eyeball" estimate from a data plot (ref 1, p. C-19; Appendix A, p. A-C-4 and A-C-5).

- 14 - 05/95

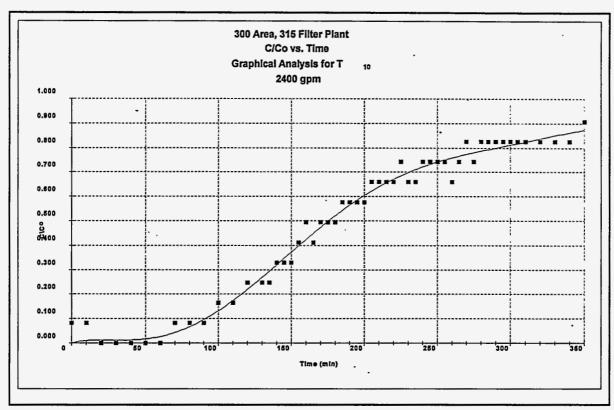


Figure 2: 315 Filter Facility 2,400 gpm tracer test (Source: Appendix A, p. A-C-4)

The March 23, 1995 tracer test (Test 3) appears to provide an actual detention time that is in agreement with Test 1. The flowrate during Test 3 averaged 2,127 gpm (-1.5% of the target flow). Compared to the results of Test 1, less short circuiting was seen with the actual residence time being approximately 84% of theoretical. However, the mass of tracer recovered appears to be a lower then the first test. The tracer mass recovery was calculated at 45% with an additional 16% attributed to alum loss. The calculated maximum tracer residual was never reached in the effluent. The maximum detected tracer concentration was 1.2 mg/l when a concentration of 1.47 mg/l was

- 15 - 05/95

expected.

The data was evaluated numerically and the correlation coefficient was not high enough to indicate a good statistical fit (0.87). As a result,  $T_{10}$  was required to be determined graphically as an estimate from a data plot (Appendix A, p. A-C-11).

The disparities between the two tests have been examined as follows: the alum dosage during Test 3 was slightly higher then during Test 1; and the increased alum dosage doubles the fluoride loss that can be attributed to alum (see Appendix C).

The second potential cause of these disparities is the potential interference of Preastol 2515. Preastol 2515 is a polymer that is sometimes added to the filter beds to enhance filtration. The polymer attracts colloidal material through its affinity for charged particles. The negatively charged fluoride ions could become adsorbed in the filter beds in the presence of this material and never reach the effluent stream. The polymer was not in use during the first test and it hadn't been used during the previous week. Prior to March 10, 1995, Preastol 2515 was introduced to the filter media again. A 2,160 gpm tracer test (Test 2) was attempted at the 315 Water Treatment Facility on March 10 while the polymer was being used. Due to polymer interference, the results of Test 2 were not consistent with estimates of fluoride residual; therefore, Test 3 was scheduled. When the manufacturer of the polymer

(Stockhauser) was contacted, the individual knew of no test to determine residual concentrations in a media and did not know the half-life of the material. In preparation for Test 3, the filters were backwashed every day to flush out as much polymer as possible. Nevertheless, the degree of polymer removal is unknown. The lower recovery rate for the tracer may be attributed to residual polymer in the media.

Finally, a review of the graph of relative concentration versus time (Figure 3) shows that the tracer had not quite reached a steady state level before the end of the tracer addition (twice the theoretical detention time) during Test 3. However, according to the Guidance Manual, "it is not necessary to reach a steady state concentration in the exiting water to determine  $T_{10}$ ; however, it is necessary to determine tracer recovery. It is recommended that the tracer recovery be determined to identify hydraulic characteristics or density problems" (ref 1, p. C-10). Therefore, the  $T_{10}$  determination is still valid for this test.

The  $T_{10}$  values determined from these two tests provide conservative  $T_{10}$  estimates for any flow less than the tests flows. Averaging the  $T_{10}$  analyses will provide conservative estimates of  $T_{10}$  for all flows less then or equal to 2,318 gpm.

- 17 - 05/95

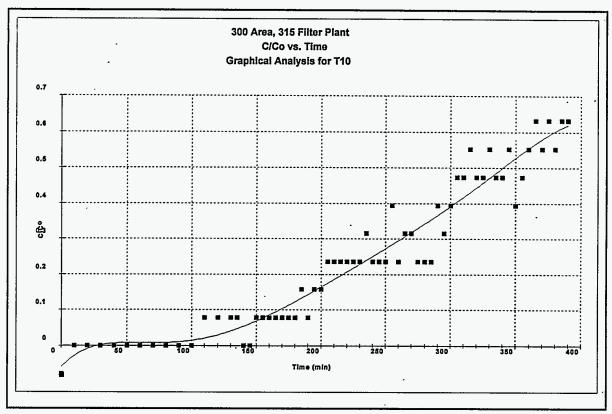


Figure 3: 315 Filter Facility 2,160 gpm tracer test (Source: Appendix A, p. A-C-10)

# V. CONCLUSIONS AND RECOMMENDATIONS

The results of the two flow tracer studies (Q peak and 0.90\* Q peak) performed at the 315 Water Treatment Facility are shown in Table 4.

- 18 - 05/95

TABLE 4 Results of Two Tracer Tests at The 315 Water Treatment Facility								
Target Flow	Target Flow Average Test Flow		Actual Residence Time $(T_{10})$	% Tracer Recovered				
2,400 gpm (Test 1)	2,380 gpm	178 min	102 min	85%				
2,160 gpm (Test 3)	2,127 gpm	199 min	167 min	45%				

 $T_{10}$  for any flow can be determined by the following equation:

$$T_{10} = T_{10T} \times Q_T/Q$$

Where:

(ref 1, p. C-3)

 $T_{10}$  = Detention time at system flow rate

Q = System flow rate

 $T_{10T}$  = Detention time from tracer test

 $Q_T = Flow during tracer test$ 

This equation, when used in conjunction with the results of the 315 Water Treatment Facility tracer tests, simplifies to the following:

$$T_{10} = 300,000/Q$$

Where:

(Appendix A, p. A-8)

 $T_{10}$  = Detention time at any flow (minutes)

Q = Flow (gallons per minute)

Because of the change in mission at Hanford from weapons production to environmental restoration, the water treatment facilities are expected to continue having decreased demands. The high flow tracer study performed at the 315 Water Treatment Facility (ID# 418408) would continue to provide conservative  $T_{10}$  estimates if future flows do not exceed test flows.

The March 6 tracer test verified that there were no unfavorable hydraulic characteristics or density problems with 95% of the tracer recovered or accounted for when the test was stopped. The March 6 test appeared to provide a reliable determination of  $T_{10}$ . The results from the March 23 test were analogous to the first test, but such a high recovery was not indicated. However, conditions that may have affected tracer recovery should not have impacted the  $T_{10}$  determination. The data was not far from a good statistical fit (0.85) and the calculated retention time fell in line with the results of the first test. A steady state concentration in the exiting water is not necessary to determine  $T_{10}$  which would indicate that the  $T_{10}$  determinations from these tests provide a reliable means to determine  $T_{10}$  at any flow through the same configuration using the average of the two tests.

# VI. REFERENCES

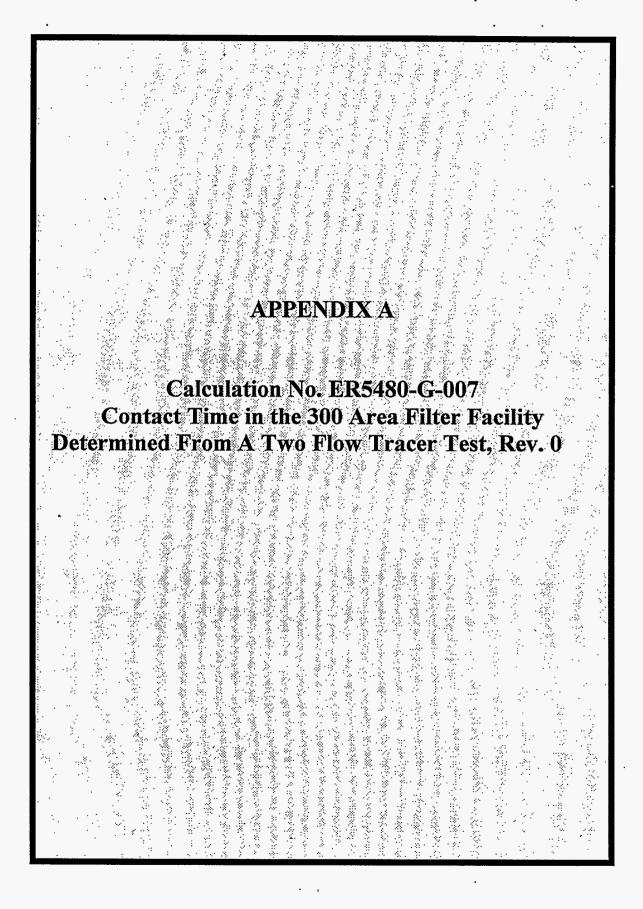
 Guidance Manual for Compliance With The Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources;
 U.S. Environmental Protection Agency, March 1991.

- 20 -

05/95

- Disinfection Contact Time Study Plan, "300 Area Tracer Study," Rev.
   prepared by ICF Kaiser Hanford Company, December 1994.
- Letter, C.L Riley (Washington State Department of Health) to D.J.
   Ortiz (U.S. Dept. of Energy), "Hanford Nuclear Reservation, Surface
   Water Treatment Plants Tracer Study Requirements," October 19, 1994.
- 4) Hudson, H.E., Jr; "Water Clarification Processes: Practical Design and Evaluation," Van Nostrand Reinhold Company, New York, 1981.

- 21 - 05/95



KAISER EI HANFORD	NGINEERS	CALCULAT	TION IDENTIFIC	CATION AN	ID INDEX	Page <u>(</u> of <u>()</u> Date 3/28/95
Discipline E/1V:/0	tatus and description of the	O/Job No. <u>E</u> A	5480			80-6-007
Project No. & Name	TRACER/ Conta	127 STURY	V OF Hanf	ord WA-	TER PLAN	175
Calculation Item(	Contact Ti	me in	300 AREA	Filter	PlanT	DeTermined.
From	Two Florr	TRACER	TEST		······································	<del></del>
These calculations apply	y to:					,
Dwg. No.			<del></del>	Rev. No.	·· <del>·</del> ·································	· · · · · · · · · · · · · · · · · · ·
						·····
Other (Study, CDR)						
·					Rev. No.	•
The status of these cale				•		
Preliminary Calcul	ations		-			
Final Calculations						
Check Calculation	s (On Calculation Dated	****		}		
Void Calculation (	Resson Voided					
				<del> </del>		)
•	Drawings?  od by independent *check	c" calculations?		□ No □ No ·	· ` .·	
	Rev. 0 Signature/D		Rev. 1			Rev. 2 iignature/Date
Originator	2.5th . 1 . 1 . 1	36-10-	Signature	.Data		orginature/Date
Checked by	William & filler	3/31/95		•	<del>                                     </del>	
Approved by	J.W. Furh	3/31/95			<del>  '</del>	<del></del>
Checked Against Approved Vendor Data			<del></del>			<del></del>
	1	-				
			INDEX			
Design Analysis Page No.		<b>:</b>	Description	<u>-</u>		
	OBJective, 6	iven Date	a, METHODS	REFER	ences	
	Findings, ca		<i>a</i>			
3-9	Calculations					
	Conclusio.					
			•			
A1-A17	Appendix 1	4 Fiel	ld NoTes	and Dui	Ta	
B1-B5	Appendix 1	B SPre	, ,	_	ilas	
61-614	Appendix	C 5:010			107:095	

Aiii

· · · ·	*	· · · · · · · · · · · · · · · · · · ·		011 00 000 Winsty /r	<del></del>		·				
	•			ON CROSS INDEX (Ty Iculation No. <u>ER 5480-</u>						Page CC of CC	
Subject Calculation Revision	These interfacing calculation/d provide input to the subject call and if revised may require rev		ocuments	Results and conclusions of the calculation are used in these in calculations and/or documents.	e subject	interface o	e output calculation/ uts require sion?	interface of docume	output alculation/ nts been sed?	Discipline manager's signature and date indicating evaluation	
No.	No.			Calculation/Document No.	Revision No.	Yes 'No		Yes No .		complete.	
3.	2	ER 5480-6-005	<u>γ</u>			È	-				
0	1	ER5480-6-004	0	•			Ç				
	, , , , ,			•							
						J			,		
	٠.									•	
			•		٠.	,		:			
*****				· · · · · · · · · · · · · · · · · · ·			`	.:•			
:											
٠.								·			
	:					:				•	
		•				4.					
										-1	
••				•		· .				•	
	•										
• • •							•			1.	
Y 11	"		• •			ļ			<u>.                                    </u>		
:	V) 4				•					•	
:		•					· :				
•			•					,			

KAISER ENGINEERS		Calc. No. <u>ER5480-6-007</u>
HANFURD	DESIGN ANALYSIS	Revision O of 10
Client ICF-KH	WO/Job No. ERS480	
Subject 3/5 Filler Plant	Date 3/27/95 By	William W. PickeTT
Retention Time	Checked 3/31/95 By Revised By	f. br Fuh
Location 300 AREA	Revised By	
DATE TEVEL TUE	POSE OF THIS COL	4.722
TO DETERMINE THE	actual Detention	Time (To) in The
300 AREA FILTEN P.	lant Based on Re	54/75 OF 9
SODIUM Flyoride	TRUCE STUDY	
Given Data: 315		
1.605 X10 ! ( Re	Four Filters on Li	72 15
1.003.00		
THE Fluo-ide ion	concentration in TH	e Feed
	69/e (ReF3 P.4)	
	Conentration Was 0.4 roll	
Peed Rate was 620	28 Tymin during The 2,40	0. 9911 1057. Allendix A
The Background Eleneide	encentration vias 0.4 mg/e and	of The Fluoride
	80.0 mymin during THE 2.16	
		P. A-12
	Due to Doppen all	in Dosage
15 0,1 mg/2 C	Re.F. 9 P.31	<u></u>
Flynede Ton Loss	Due To 25 PPm alan	n Posage
is 0.7 mg/e (Re		
METHODS: THE calcula	Tions are performed	using methods
Outlined in Reference	e Janda Standar	dengineeing
equatrons. Excel 5.0	ons and Graphing	
1 / / / / / / / / / / / / / / / / / / /		•
1) 0.5:4Fec7.0	Contact Time Study	Plan, 300
AREA TRO	GCER Study, Rev. D.,	December 1994.
and Disint	Manual ton Compliance	Rublic buter School
45,79 54	Fure Water Sources; M.	
	7 FR5480-6-005 Rev. 3	
Time and	Flande in Jeczon Rut	e (300_AREA):
4) Calcula 7:01	FR5480-6-004 Rev.O 11	Flooride LOSC
	7.07 OF ALGO	
;		1

KAISER ENGINEERS HANFORD

Calc. No. <u>ERS480-6-067</u>
Revision <u>O</u>

DESIGN ANALYSIS Page No. <del>P</del> of 10

a	ــر ــ ـ		•					WOII	- h 1 h -	7	- 1		_	<del>-</del>	··/	<u> </u>
Client 7						<u>.                                    </u>					A54				2- 1-	
Subject		Fili						Chook	3/2	7/95	Ву	Will	14m	W. P.	CKE	<u> </u>
	c Ten							Pavia	od 3/	31/95	By By	-fe W	Tul			
Location	1	! 1	<u> 300</u>	_AA	EA	1 1	1 : :	Revise	su i	: 1	I :	1 (	1 1	; ; ;		<del></del>
						<del>}</del>	<del>                                     </del>		<del>                                     </del>		1 1	<del>                                     </del>	<del>                                     </del>			<del></del>
Find						-, <del>,</del>	<del>!</del>		<del>-   -</del>	<u>                                     </u>			<del></del> -	! ! !	<del>-   -</del>	<del></del> -
				•			Tim		: )	i 1	, .	, ,	1 !			
	7/2	20	30	20 /	4 R	F9_	W	e <u>re</u>	:0	e 1-11	1013-7	ed_	Za	130	4	<u>i</u>
						<u> </u>			1 1			<del>Tio</del> )—	<u> </u>	1 00 -1	<del>-   -  </del>	<del>_                                    </del>
<del></del>			1.70	119e	<u> </u>	-10W	AVE	agge	Flow	4 KE	Sede	rce	lime	70 F10	eride l	PCCOVE
(Append.				7,40	<u>Q_</u> .	mage		2,38	<u> </u>	-	102	min	-	8	5%	
	<u> </u>		<u> </u>	2/16	0 9	PKS		7127	9pm	. [	16.7	11:00	<u></u>	4	5%	
(Append.	XA	P	<u>-3, '</u>	(-19)	C-1	0)	<u> </u>		<u> </u>		<u> </u>			; <u> </u>		
						1	. : }	i	<u> </u>		<u>:</u>	<u>'</u>		!		
_!!	THE	R	esed	ence	77	ne 17	70) is	1	He!	3/5	- F.	Tel	Pa	an T		;
	car	7	be!	: 2	cal	cula	red	1 4	15,22	a	THE	F	01/0	وت برس	2	;
· ;	0.0	1,17	bu			1	1	14/5	a	mel		Bu	رسادي	5 0	/ <del> </del>	
	61	الى سىزر	Lie	1	· •	7-7-	Fil					ا روس	1			
-•	چرن : :	· ·. J.	<b></b> ر	, ~ D=		<u> </u>		; ; ; ; ; ;	:	· · · · · · · · · · · · · · · · · · ·			T			•
	·		··· (	7			=3	C)C)	000	). !			; ;		;	
	;		·	- · // :	OM	1,11,1	<u>-</u>	<u>ارت ر</u>	10.0		Ţ	· · · · · · · · · · · · · · · · · · ·	;		i	
	,		<del>:</del>	!			·	7100	V. (Y.	<i>???).</i> ;		ļ . i	-	<del> </del>	·—¦· <u>-</u>	
	A 00	1 2 6 19	!  /-	<u></u>	ئـــــــــــــــــــــــــــــــــ		 5.!7		<u>::</u>	/ 100	. <u>:</u>	ـــــــــــــــــــــــــــــــــــــ	1 .0	·	<u></u>	
															ياريد	
							durin	_								
-:-	ine	aa	<i>a</i>	POZ	! 64.	?_5 .	Res. 4	CHICA	<b>-</b> .	line.	<b>C.</b> : 2	a 1C	141	0.70.	- : -	
	100		4				/			· · -	-	,/	_	,		,
						_	THE							-		
						Cal	cula.Te	- ; <i>"</i> "	F140.	ride	. He	e over :	4	nel		-
	Resea	ence		me	•			<b></b>		!_	• • • • • •	<u>.</u>	! !	:		
								1-7-		:!-	<u>.</u> ;		: 		_ !	
							He. S									i
i	6-40	H.S	use	d 7.	O	Calco	yla Te	:96 i	F/40.	rde.	Rec	معران	4 .6	ncl_	_ !	
	Hese	den	-ســـ	Tim	7 L.	ļ i			:	<u>į</u>	ļi	<u>.                                    </u>	] -			
	<u> </u>	::_	!			<u> </u>	لللللل		!		<u>: i </u>	<u>'                                    </u>	<u> </u>			
Calcula		_		<u> </u>	· · <del>· · · ·</del> ·	ļ_i.					<u>! _</u>		<u> </u>	_!!	1	
	THE B	natur.	4.0F	- 14	. يحي	Calco	1/47.0	75.W.	11.6.	c. P/	e For	nea		n: 7	He	
							97:									
;		2,40	2 91	on	Te	\$ Z	THES	ė	alca	1/9/10		Wer	- 1	PerFor	nen	F
	i ;	Over	- 01-	16/	يريان	K 12	V.TH	an	_EX	cel	.SP	ead	-56	cat		
									:		:	,		•	1	,
		;	1 1	}	i	1		Ţ	: 7	1	;			T- T-	1	
	Da	T4 .F	ימים	a	570	o de	50.7	مرم دن	57	dis	(1)	2.1	ر در م	celera	-1	
	Two	•	1			1)	919.04	beal	ري <u></u> بر	20.0	dad	···-	C 12.	4 1 4H. C.	1	
* ***	:	11.9	) <del>"</del> -	•			J. YNN	, Con (	/:	12/	1100	4	PEFI	P.C	-14)	; `
						(د ا	Nume	1200	i m	716	/	(-'	2 2 4.02	a professional		
* ** *** ***						;	1 1 4143 6		1.16	برب :	•	•				
		* *** *	*													

Client TCF-KH  WO (Job No. \$85480 / FODBY)  Subject 3/5 bldg Retention  Date 3/27/195 By William W. Picke 77  Time Checked 3/31 bs By L. W. Foll  Location 300 AAFA Revised By  DETERMINATION OF DETERTION Time TIO:  The gaptical method, Tio is Read directly From  A gigat of dimensionless concentration versus Time  In the numerical method, the Data is evaluated  Name of ally and a Straight Line is developed through  A sem logarithmic plot of the Data to Calculate  The To Value, assantion of the Line is used to Calculate  The To Value, assanting the Concentration coefficient  Indicates a good Statistical E.T. (0.9 or above)  With the numerical methods, Tio is determined as  The Solation to an education instead of an exception of an education instead of an
Subject 3/5 Bldg Retention Date 3/27/195 BV William W. Pickett 7 Time Checked 3/31/45 BV Liv. Fact.  Location 300 HAFA Revised By  Determination OF Detention Time To:  The Medical method, To is Read directly From a graph of dimensionless concentration years. Time  In the numerical method, The Data is evaluated  Name rically and a straight Line is developed through a semi-logarithmic plot of the Data The Contentration Coefficient indicates a good statistical fit to 9 a calculate  The Tio Value, assaming the correlation coefficient indicates a good statistical fit to 9 a above)  With the numerical methods, Tio is determined as The Solyton To an equation instead of an
Checked 3/3/As By I. W. Fal.  Location 300 AAFA Revised By  DETERMINATION OF DETERTION TIME TO:  The gaphical method, The is Read directly From  a graph of dimensionless concentration kesses time  The numerical method, The Data is evaluated  numerically and a straight line is developed through  a semi-logarithmic plot of the Data to calculate  resalting equation of the line is used to calculate  The Tio value, assaning the correlation coefficient  indicates a good statistical fit (0.9 or above).  With the numerical methods, The is determined as  The Solation to an equation instead of an  "eyeball" estimate from a data plot.
Location 300 AMEA Revised By  Determination OF Detention Time Tio:  In the gaphical method, Tho is Read sixetly From  a gight of dimensionless concentration keesas time  In the numerical method, the Data is evaluated  numerically and a straight line is developed through  a semi-logarithmic plot of the Data the  resulting equation of the line is used to calculate  the Tio value, assaning the correlation coefficient  indicates a good statistical tit (0.9 or above).  With the numerical methods, Tio is determined as  The solution to an equation instead of an  leveball" estimate from a data plot.
Tip The gaphical method, Tip is Read directly From a graph of dimensionless concentration kesses time  In the numerical method, the Data is evaluated  numerically and a straight line is developed through a semi-logarithmic plot of the Data the resalting equation of the Line is used to calculate  The Tip Value, assaning the correlation coefficient indicates a good statistical fit (0.9 or above).  With the numerical methods, Tip is determined as the solyton to an equation instead of an "eyeball" estimate from a data plot.
In the numerical method, the Data is evaluated  numerically and a straight line is developed through a semi-logarithmic plot OF the Data the resalting equation of the Line is used to calculate  The Tio value, assaning the correlation coefficient indicates a good statistical fit to go above.  With the numerical methode, tio is determined as The solution to an equation instead of an "eyeball" estimate from a data plot.
In the numerical method, the Data is evaluated  numerically and a straight line is developed through a semi-logarithmic plot of the Data the resalting equation of the line is used to calculate the tio value, assaming the correlation coefficient indicates a good statistical fit (0.9 or above).  With the numerical methods, to is determined as the solation to an equation instead of an "eyeball" estimate from a data plot.
numerically and a Straight Line is developed through  a semi-logarithmic plot of the Data the  resulting equation of the Line is used to calculate  The Tio Value, assaming the correlation coefficient  indicates a good statistical fit (0.9 or above).  With the numerical methode, Tio is determined as  The soliation to an equation instead of an  "eyeball" estimate from a data plot.
numerically and a Straight Line is developed through  a semi-logarithmic plot of the Data the  resulting equation of the Line is used to calculate  The Tio Value, assaming the correlation coefficient  indicates a good statistical fit (0.9 or above).  With the numerical methode, Tio is determined as  The soliation to an equation instead of an  "eyeball" estimate from a data plot.
A sem: logarithmic plot OF THE Data THE  RESALTING EQUATION OF THE Line is used to calculate  THE Tio Value, assaming the correlation coefficient  indicates a good statistical fit (0.9 or above).  With the numerical methods, to is determined as  The solation to an equation instead OF an  leyeball" estimate from a data plot.
The Tio Value, assaning The correlation coefficient indicates a good statistical fit (0.9 or above).  (Ref. ), P (-14)  With the numerical methods, Tio is determined as The solation to an equation instead OF an eyeball" estimate from a data plot.
indicates a good statistical fit (0.9 or above).  (ReF.), P'C-14)  With the numerical methods, To is determined as The solution to an education instead of an "eyeball" estimate from a data plot.
With the numerical methode, to is determined as The solution to an equation instead of an "eyeball" estimate from a data plot.
With the numerical methode, To is determined as The Solyton to an equation instead OF an "eyeball" estimate from a data plot.
With the numerical methode, To is determined as. The solution to an equation instead of an "eyeball" estimate from a data plot.
THE SolyTon To an education instead OF an "eyeball" estimate from a data plot.
THE SolyTon To an education instead OF an "eyeball" estimate from a data plot.
-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1
THE Tracer Eluo-ide concentration is obtained as Follows
Tracer conc (c) = Flyoride measured - Baseline
$C = I_0 I - 0.4$
$(D = 2 \cdot D \cdot C = U)$
C= 0.7 mg/e
Dimensionless concentrations are developed by dividing tracer concentrations by the applied  Fluoride dose (Co). (ReF. J., P. C-16)
Fluncide doselle
(ReF. 7, P. C-16)
Co is determined From The Sodium Fluoride in Section Rate and The average Flow as Follows:
- Jec Tion Rate and The average Flow as Follows:
Co = 620.8 m/min (Appendix A, P. A-1)
min ( appendix A )
El noride Ion Concentration = 17.69 F (ReF.3, P4)

KAISER HANFORD	ENGINEE	R <b>S</b>	٠	·	•			-6-00
	DESIGN ANALYSIS  Revision  TICF-KH  WOLDON NO. EKS 480/FOOLAGE  WOLDON NO. EKS 480/FOOLAGE  TIME  Chacked 3/51/95 BY William Ut Picker  Con Carrier Town Feel Late (E cone of Feel)  Average Flow  Con Carrier Town Feel Late (E cone of Feel)  Average Flow  Con Carrier Town A Feel  Con Carrier							
Client TCF-	DESIGN ANALYSIS  Page No. U of J  WO Job No. Ext 480/Food 44  BOT JIS Earlite Return Ton Date JB7/195 By William W Pick  Time Checked J1/195 By William W Pick  Time Checked J1/195 By William W Pick  Time Checked J1/195 By William W Pick  Tone Confidence Test Play Tone Checked J1/195 By William W Pick  The Dignersicaless Concentration is now determined:  The Dignersicaless Concentration is now determined:  The Dignersicaless Concentration is now determined:  To The Graphical method a Plot of The Verses Tone  School discostly From The Graph W Hen Too O. 10: (REF) J. P. C-17)  Double Confidence To School discostly From The James Japan  US Approximation of Checked J1/1960 Action of the Additional Schools of the Checked Schools of the Additional Schools of the Checked Schools of the Check			or <u>70</u>				
		ReTe	.701					0 Ka-
								1161
Location	DESIGN ANALYSIS  PROVISION  TOP-KH  WOLJOD NO. EKS480 FOODLY  TIPE  Checked 3/21/85 BY WILLIAM  Revised  BY  Control  Average Test Flow = 1007 fmer (Appendix C. P.C.)  Co = [insection Field late)   Flood on Feel    Average Flow  Average Flow  Average Flow  Average Flow  Average Flow  The Ornewstooless concentration is love determined:  Co = 1.213 mg/  The Ornewstooless concentration is love determined:  Co = 0.77  1.213  - 0.577  To the Graphical method a Plot of Yeo verses the graph when Yes = 0.10. (Ref. 2, Pe-it)  Deallicul analysis & To Fee 2:100 g/m.  Additional Steels  Additional Residence Time  And T = Theoretical Residence Time							
	DESIGN ANALYSIS  PROVISION  DESIGN ANALYSIS  PROVISION  TOP ON THE CENTRAL OF DATE 3/57/45 BY WITHOUT HE KET  Checked 3/41/95 BY WITHOUT HE KET  Checked 3/41/95 BY WITHOUT HE KET  CONTY AVERAGE TEST FLOW 9009 YMMM (APPENIX G., P.C.I.)  CONTY AVERAGE TEST FLOW 9009 YMMM (APPENIX G., P.C.I.)  CONTY AVERAGE TEST FLOW 9009 YMMM (APPENIX G., P.C.I.)  CONTY AVERAGE TEST FLOW 9009 YMMM (APPENIX G., P.C.I.)  CONTY AVERAGE FLOW  AVERAGE FLOW  THE DIMENSIONALESS CONCENTATION IN HOLD DETERMINED:  WHEN THE GRAPHICAL METHOD A PLOT OF GLO VERSES THE  SCHENOLOGY ANALYSIS FOR TO FOR 21800 GPM  IS APPENDIX ANALYSIS FOR TO FOR 21800 GPM  IS APPENDIX ANALYSIS FOR TO REQUIRES THE  Additional Analysis For TO REQUIRES THE  Additional Starts  Additional Starts  THE Numerical analysis For TO REQUIRES THE  Additional Starts  Additional Starts  Additional Starts  THE Numerical analysis For TO REQUIRES THE  Additional Starts  Additional To The  Additional Starts  Additional Starts  Additional Starts  THE Numerical analysis For TO REQUIRES THE  Additional Starts  Additional Starts  Additional Starts  Additional Starts  Additional Starts  THE Numerical analysis For TO REQUIRES THE  Additional Starts  Additional Starts  Additional Starts  THE Lapsed Time  The Corporation OF 10310(1-40)							
		DESIGN ANALYSIS  Revision  Page No. 44 o  WO(Job No. Ef5480/f00644  WO(Job No. Ef5480/f00644  Wolling Return Date 3/27/45 By William W.P.  Checked 3/21/95 By J. W. Fools  Revised By  Average 7557 Flow - 9009 Imm. (America C., 1)  Average Flow  Average Flow  Co - (13cc1:00 Feel Rate) F conc m Feed  Average Flow  Co - (20.8 m Feel   17.6.9 F) (10  min L Feed toodard.) 19  9009 C.  Tensionless concentation is now determined:  When Sto = 0.0. (Ref 2) PC-17  Distributed analysis & Too feel 200 gran.  Lis. gaproximately.  90 min See Appendix C. P. C-4  unnerical analysis for To Requires The  gaple Steels of the steel of the steels of the condition of the steels of the condition of the con				-1-C1		
		DESIGN ANALYSIS  Revision  Page No. 4 of  WOJJOB No. Ef5480/f00014  WILLIAM Retartor Date 3/87/1/8 By Milliam W. B.  Checked 3/31/95 By Milliam W. B.  Revised By  Average 7.55 7 Flore 7009 4min (America C., I  Co = (inJection Feed late) (F Cond in Feed)  Average Flow  Average Flow  Co = 620.8 MFeed   17.6.9 F   10.   1000 me  Min   1 Feed   1000 med   19  Mensionless: Concentation is how determined:  Co = 0.7  1.213  - 0.577  Graphical method a flot of 960 verses  veloped To is Read directly From The  When 960 = 0.10: (REF 2, PC-17)  Distillical analysis of To For 2300 gen  Vis approximately:  90 min (See America C. P. C. 4)  Imperical analysis for To Reamines  The determination of 177  Where: f = clapsed time  and T = Theoretical Residence Time				-		
		DESIGN ANALYSIS  Revision  Page No. 14 of  WOLJOB NO. Ef5480/PORBLY  WILLIAM RETARDO DATE 3/27/45 BY WILLIAM W. P.C.  Checked 3/21/45 BY WILLIAM W. P.C.  Checked 3/21/35 BY J. W. Find.  Revised BY  AWARDS TEST Flow - 9009 Imin (Appendix C., I.  CO - (17362700 Field Rate) F Conc. on Feel  AWARDS FORM  AND  AND  CO - (200.8 MFeel 17.6.9 F) [10   1000 mg  min						
		DESIGN ANALYSIS  Revision  Page No. 14 of  WOJJOB NO. Ef5480/F08684  WOJJOB NO. Ef5480/F08684  III.TV RETENTION  Date 3/27/45 BY WILLIAM WE Fix  Checked 3/21/95 BY J. W. Fix  Revised By  Average 725 T Flow = 9007 Imin (Appendix C, I  CO = (inJection Field Rate) F Conc. or Feel  Average Flow  CO = 620.8 M Field   17.6.9 F)   10.   1000 me  min				1		
		DESIGN ANALYSIS  Page No. 4 of  WOLJOB No. Efs480/F00644  WOLJOB No. Efs480/F00644  Page No. 4 of  WOLJOB No. Efs480/F00644  OCHOCKED 3/27/95 BY WILLIAM W. P.C.  Checked 3/21/95 BY W. Fish  W. Fish  Revised BY  Average 7257 Flow = 9009 Inich (Appenlix C., I.  Co = (inJection Feed Rate) Flow  Average Flow  Co & 620.8 m Feed   17.6.3 Flow  Revised   19  700.9 Cl  Inansioaless: Concentation: 13 Nov. determined:  Vo = 0.7  1.2/3  = 0.577  Revised method a Plot of 96 verses  Eveloped To: 5 Read dicectly Flom The  When To = 0.10: (Ref. 2 P17)  Ordelical analysis & Tio For Diteo gpm  Its gpmoximaty;  To many (See Appendix C. P. C-9)  Revised analysis For Too Recurses The  Wher: f = clapsed time  and T = Theoretical Residence Time  and T = Theoretical Residence Time					hg)	
	DESIGN ANALYSIS  WOUND NO. Efst 480/FOODERY  WOUND NO. Efst 480/FOODERY  TITUE  Checked 3/37/95 BY WILLIAM WE Find  Revised  By  Revised  By  Average Test Flow = 9009 'Anin (Apredix C, P. 1)  Average Test Flow = 9009 'Anin (Apredix C, P. 1)  Average Flow  Co = 620.8 m Feel 17.6.9 Flow   1000 ms    Min   Feed   17.6.9 Flow   1000 ms					- /		
to the state of the second sec	manus roman sama sama (f		·	· · · · · · · · · · · · · · · · · · ·				<u></u>
	e veneral de la companya de la compa	<u>Co_</u>	= 1.2	-13 mg/	<del></del>			
1								
	e Dimension	1055: 60	ncental	Fon is! No	w de 7	emined		
	* * * * * * * * * * * * * * * * * * * *							·
		4	/.	<i>∂.1.</i> 3 '			٠.,	-
		,	= 0,	577	<u> </u>			
. For	THE Grap	Hicul 1	neTHod	a Pl	07 OF	9/60	verses	Tino
	chevelope	d 71	05	Read di	cc71x	-From.	The	1
	W. A. W. W. A. W.		Co = C	.10.	ReF. 2	P 6-17	)	·
			a les		; ; .	; ;		1 · · · · · ·
		APPr	OX inute	14:	1-01 5	700 9 00	7	· 
					// 40		D 6 1	
	,			, ,		,		() 1
	dditronal	ul and	145.5	For To	-Read	riceS	THe_	
,		det	inina.	00-0F	109106	1-4co)	·	
					<u> </u>			
(ReF. 2, P. C	-/7)	WHE.	7	t= elapse	d time			•
<b>,</b> ,,			and T.	= THEOr	eTical R	esidence	Tim.	c
٠					5	4-4300-037	KEH-0037	.00 (06/92

A-4

		NGINE	ERS					Calc. No	. ERSY	80-6-007
HANFO	IRD			DECICN	10		Revision		0	
				DESIGN	ANALYS			Page No.		of <u>/</u> 8
Client 7								1/FOOBB		
Subject		Facility	Re Ter	77,00	. Date	367/9			n W	Picke 77
Location		300 A.	A E A	·	Revised	3/3//95	By	J.W.	tuk	
Tio Con	·T'	100 A	11077	1 1 1	Nevised	T i I	; ; ;	! ! ;	1	1 1 1
170_00	In	THE EX	ande	used	earlier	7.0		13:40	<del></del>	
1 1 1	777				17.67	1	1 1	132.70		
				7= 13	40-10:2	0	1 !			
	]					· j ]				1 ; ;
			<u>i I :</u>	ナニ	000 mi	n	;	,	i i i	: i
						:	; ; ;	;   ;	1 : 1	
	<del>                                     </del>		_				· · · · ·			١.
		上丁二	Plan	T Volun	re	1	1 1 1			:
	111		as	11/401	Test Flo	ow	,			
	<u> </u>								;	
<u> </u>			!   . <del></del>	T = 1	605 X	10° C	· · !			
	ļ. <u> </u>				9009	1 l/mir	71			
			· · · · · · · · · · · · · · · · · · ·	: ;			, .			
	1-1		· · · · · · · · · · · · · · · · · · ·	ナニノブ	8 min	1				
	<u> </u>							i		
	THere	Fore 7	HeT	wo p	155500	Pie	C-25	Can	be -	) :
	<u> </u>	Led	For!	and 7	He	Graph:	cul	. Analy	5-5.	conplete
	<u> </u>				i:	· · · i	٠	' į '		1 1
			10910	(1-400)	. =10	19.66.1	- 0.5	77)		
- <del></del>	;					<u></u>				;
•	• *	}		·	= -0.	374				-
			-4	- ر <u>ن</u> ا	·					
•	: :		: : /	77. = . 2	100	• . •		,		:
	· ·				אַרו	·	••••	;		,
	·		- ,		<u></u>		; ;	;	· • •	- !
	<del></del>			= 1,12	<del>/-</del>		· 	·- :	~ -	
	7//-						: ·			-
	THESE	Calca	1015	are	Repeat-	ed_at		20H 7	سے بریں	<u></u>
	177-6	ckal,	74-250	data	4/2		arly	- Rige	e 55.e.c/	<u> </u>
	CT		1-100)	Versus	_77.	1005	Tain.	THE	FiTTA	d:
	<u>:3 //4/5</u>	MZ=Zine	para	meters.		He F	ollow	ing e	Q44710	<u></u> : إنه
	<del> -:</del>	- <del></del>		11 6/	1	/+/-	<u>-</u>			
				310(1-16		· /	_ <i>D</i> )_	(ReF.	- 0.4	
	- <del></del>				<del>-</del>			CALL. O		(8)
		WA	6/6	Slope = 1	7 = -0.	6059		~ · ·	<u>:</u> .	
	1	0/27		TecopT= 1	() 0. 3	007		40.1.		-,
<del></del>	· Co	rrelation	oettici	en7 =	<u></u>	i	({ A	ppenol. X	جرت.	(-5-66)
	:	-:  - '				·				
	;							· ·		
	<del>.</del> <del>.</del> .									i ,
77 77 46		** ** **								

DESIGN ANALYSIS  Page No. 6 of 10  Wolldon No. FASTIO /Food84  Subject V. Facility Retention  Time Checked 1/a /95 By William No Pickle By  The Checked 1/a /96 By William No Pickle  Particle 1/a /96 By William No Pickle  Wilson 1/a /96 By William No Pickle  Wilson 1/a /96 By William No Pickle  Wilson 1/a /96 By William No Pickle  Description 1/a /96 By Wilson No Pickle  Description 1/a /96 By Wilson No Pickle  Description 1/a /96 By Wilson No Pickle  Page 1/a /96 By Wilson No Pickle  Description 1/a /96 By Wilson No Pickle  Page 1/a /96 By Wilson No Pickle  Description 1/a /96 By Wilson No Pickle  Page 1/a /96 By Wilson No Pickle  Description 1/a /96 By Wilson No Pickle  Page 1/a /96 By Wilson No Pickle  Description 1/a /96 By Wilson No Pickle  Page 1/a /96 By Wilson No Pickle  Description 1/a /96 By Wilson No Pickle  Page 1/a /96 By Wilson  Page 1/a /96 By Wils	KAIS HANFO	ER ENGII Dro	NEERS .					alc. No. <u>En</u>	
Subject 3K Facility Retention Date 3/27/95 By William Works  Time Checked 3/2/95 By W. Fac.  Location 300 AREA Revised By  To cat' I numerical Analysis 9s Will The Say Mick  9 Malysis 15 Challetted 47 9Co = O.(O. Rearrans) 113 The Revisuas equation 47 9Co = O.(O. Rearrans) 113 The Revisuas equation 17 = (103/0(1-80) - b) (T)  When t = Tio  Tio = (103/0(1-80) - b) (T)  Decuse The Regression is 9 3000  Statistical Fit (0.95) and The numerical matthod eliminates The Name and The numerical matthod eliminates The Name and Results will be used the Say The Sa				DESIGN A	NALYSI	S			
Description 300 ANEA Revised Sty J. W. Fish.  The Coati Dunderical Analysis 95 No. 714 The Survival Property of Style Survival Su	Client	ICF-KH			WO/Job	No. FRS	480 IF	00684	
Location 300 AREA Revised By  To COST.  The numerical radius, s as with the survived.  gradues, is evaluated at the survived.  Revious evaluated at the survived at the survived.  The first plant to survived.  When to to logic (1-0.1) = 0.3004) (178).  Objectives The Regression is a 300d and the numerical mathematical first (0.95) and the numerical mathematical eliminates. The numerical Results will be used.  The value, the numerical results will be used.  The data from the states for (0.87), there are not a good states in first (0.87). There are not a good states in first (0.87). There are not a good states in first (0.87). There is a survived for the survived	Subject	315 Facili	y Retent	on					1 Picke
The numerical hardysis, as noth the gardice (  ghalysis, is evaluated at the OLO Regardsing The Revious education  At = (logic(1-80) - b) (T)  When t = Tio  The = (logic(1-0.1) - 03004)(178)  Obosq  Obosq  Elaistical Fit (0.95) and The numerical method eliminates the Numerical Results will be used  The data From the 2/03/95 Trace Test  Were Not a good statistical Fit (0.87). There  The gaphical mathed had to be used.  O Ilat gam To = 167 min. (Appendix C, P, C-9, C-10)  Determination OF M. Mass. Recovery:  The First Rut of Determinated Mass. Recovered  IS calculations mass in Jeted  Mass : sected = (in Fitting Feed Rate) (Tracinsected  mass : sected = (in Fitting Feed Rate) (Tracinsected  = 600.8 at (17.69.7) (R. 180.1) (180.1)	1		12-1				By	W. Fish	
The numerical Analysis as with the Surffice of Analysis is evaluated at the Oilo Rearraction The April 18 of the Analysis is evaluated at the Oilo Rearraction The April 18 of the April 18 of the April 18 of the Analysis of			HAEA	1 : 1 . 1	Revised	1 1 1 1	ί	· · · · · ·	; j ; i
gnolysis is evaluated at the = 0.10 Rearingsing The periods elevation of the periods elevation of the periods (17)  The flogic (1-0.1) = 0.3004) (178)  When t = 170  Obosq  Occurse The Regression is a 3000 statistical forth (0.95) and the numerical method elionizates the Numerical Results will be asserted when the state of the s	1/0	1-1 ! ! !	a de la de	ulies is los	190.70		0 100		
Privals educations  The (10310(1-120) B) (T)  When T = Tio  The = (10810(1-0.1) - 0.3009)(178)  Obloga  Obloga  Obloga  Obloga  Obloga  The Regression is 9 800d  STATISTICAL FIT (0.95) and The numerical method eliminates The Numerical Results will be asselt to value, The Numerical Results will be asselt that Numerical Results will be asselt that Not 9 800d STATISTICAL FIT (0.87). There The graphical mathod had to be used.  Object of the First part of Determining & Mass Recovered is Calculations in ass in Sected  Mass in Sected  Mass in Sected  [103000000 ] 360 min (1.000000000000000000000000000000000000									74 74
When t = Tio  When t = Tio  Tio = (logio(1-0.1)-0.3009)(178)  Obosq  Obosq  Obosq  Obosq  Statistical Fit (0.95) and The numerial method eliminates The Newton Results will be as a set to water The Numerical Results will be asset The Numerical Results will be asset The Agod Statistical Fit (0.87). There The Not a good Statistical Fit (0.87). There The Graphical puthod had to be used.  Determination OF M. Mass. Recovery:  The First Part OF Determining & Mass Recovered is calculations mass in Jected  mass indected [indiction Feed Mite) (time insected in the country) and the country of th		Acvious	1. 2. Buch	7.00				(5.41.30.0)	777
WHEN T = TIO  When T = TIO  Tio = (log/o(1-0.1) = 0.3004)(178)  Occurse The Regression is a good  STATISTICAL FIT (0.95) And THE Numerical METHOD eliminates THE Numerical Results will be used to "excell" a to value, The Numerical Results will be used The Numerical Fit (0.87). THER WENT THE GOVERN THE STATE OF THE GOVERN THE GOVERN THE GOVERN THE GOVERN TO BE USED.  Determination OF M. MASS. Recovery:  The First Part OF Outenians & Mass Recovered IS Calculations in assistants in Jected  Mass - Jected = (in Jection Food Rate) (The insected					l i i				
WHEN T = TIO  When T = TIO  Tio = (log/o(1-0.1) = 0.3004)(178)  Occurse The Regression is a good  STATISTICAL FIT (0.95) And THE Numerical METHOD eliminates THE Numerical Results will be used to "excell" a to value, The Numerical Results will be used The Numerical Fit (0.87). THER WENT THE GOVERN THE STATE OF THE GOVERN THE GOVERN THE GOVERN THE GOVERN TO BE USED.  Determination OF M. MASS. Recovery:  The First Part OF Outenians & Mass Recovered IS Calculations in assistants in Jected  Mass - Jected = (in Jection Food Rate) (The insected			」」 : : : : : : : : : : : : : : : : : :	- (10910(1	(Ko) -	4)(-	r)		
When to Tio = (log 10 (1-0.1) = 0.3009)(178)  Tio = (log 10 (1-0.1) = 0.3009)(178)  Obosog  Obosog  Statistical Fit (0.95) and The numerical METHOD eliminates The Numerical Results will be asserted to value, The Numerical Results will be asserted to the order of the 3/3/95 Trace Test Were Not 9 good Statistical Fit (0.87). There The graphical mathod had to be used.  Oblive in the sist part that had to be used.  Oblive in the sist part of Obtaining & Mass Recovered is calculations mass in tested.  The first part of Obtaining & Mass Recovered is calculations mass in tested.  The first part of Obtaining & Mass Recovered is calculations mass in tested.					m		į 1		
The first Part OF Deterning to Mass Recovery:  The First Part OF Deterning to Mass Recovered  The First Part OF Deterning to Mass Part OF Deterning	<del>-                                    </del>	<u> </u>					1 1		
The constant of Determination of Meass Recovered  Determination of Meass Recovery:  The First Part of Determination Feed Rate) (Time in Sected)  The Colours The Name of the Colours of the Name of the State of the Name of the State of the State of the State of the State of the Name of the State of the Name		WH	en t =	Tio	<u> </u>				
Becouse The Regression is a good statistical Fit (0.95) and the numerical method eliminates the Numerical Assults will be used to work a good statistical Fit (0.95). The New To weekall a two value, the Numerical Assults will be used the graphical mathod had to be used.  Determination OF I mass Recovery:  The First Part OF Determining & Mass Recovered is calculations mass in Jected  mass injected = [injection Feed Rate] (The injected min [Injected] (17.69 F) [18]								) ; ;	<del></del>
Becouse The Regression is a good statistical Fit (0.95) and the numerical method eliminates the Numerical Assults will be used to work a good statistical Fit (0.95). The New To weekall a two value, the Numerical Assults will be used the graphical mathod had to be used.  Determination OF I mass Recovery:  The First Part OF Determining & Mass Recovered is calculations mass in Jected  mass injected = [injection Feed Rate] (The injected min [Injected] (17.69 F) [18]				TIO = (100	3/0(/=	0.1) - 0.	3004)(	178)	
Becouse The Regression is a good statistical Fit (0.95) and the numerical method eliminates the Numerical Assults will be used to work a good statistical Fit (0.95). The New To weekall a two value, the Numerical Assults will be used the graphical mathod had to be used.  Determination OF I mass Recovery:  The First Part OF Determining & Mass Recovered is calculations mass in Jected  mass injected = [injection Feed Rate] (The injected min [Injected] (17.69 F) [18]			<del></del>		-0.6	059			
Belouse The Regression is 9 300d  STATISTICAL FIT (0.95) and The numer Cal  METHOD Elinitrates The Need To "exchall" a  To value, The Numerical Results will be used  The data From The 3/03/95 Track Test  Neve Not. 9 300d STATISICAL FIT (0.87). THERE  THE 9-aph.cul multhod had to be used.  Data gen Tio=167 min (Appendix C, P. C-9, C-10)  Determination OF 11 mass Recovery!  The First Part OF Determining & Mass Recovered  IS calculations mass instanted  mass instanted  mass instanted	,								
Statistical Fit (0.95) and THE numer cal  METHOD eliminates THE Need To "exception" a  Tho value, The Numerical Results will be used.  The data From The 3/33/95 Truce Test  Were Not a good Statiscal Fit (0.87). There  The graphical multhool had to be used.  O 2,127 gen Tio=167 min (Appendix C, P.C-9, C-10)  Determination OF "mass Recovery:  The First Part OF Determining & Muss Recovered  IS calculations mass intered  mass intered [interior Feed Rule] (Time intered  mass intered [interior Feed Rule] (Time intered	-		- male 7.00.5	110 = 10	J. m				
Statistical Fit (0.95) and THE numer cal  METHOD eliminates THE Need To "exception" a  Tho value, The Numerical Results will be used.  The data From The 3/33/95 Truce Test  Were Not a good Statiscal Fit (0.87). There  The graphical multhool had to be used.  O 2,127 gen Tio=167 min (Appendix C, P.C-9, C-10)  Determination OF "mass Recovery:  The First Part OF Determining & Muss Recovered  IS calculations mass intered  mass intered [interior Feed Rule] (Time intered  mass intered [interior Feed Rule] (Time intered		Beine	TIL	Paris	<u> </u>				**************************************
method eliminates The Need To "exchall" a  Tio value, The Name all Results will be used  Title data From The 3/33/95 Truce Test  Were Not. 9 good Statis al Fit (0.87). There  The graph-cul mathod had to be used.  Determination OF 1/2 mass Recovery:  The First Part OF Determining 1/2 mass Recovered  is calculations mass inserted  mass inserted  mass inserted  = 600.8 at (17.69 F) (10 min (360 min)		- TOTIST	I	7 //	5,002	1.3 4	9.1 1 <del>- 1 -</del>	00a	
The data From The Name: cal Assults will be used  The data From The 2/3/95 Trace Test  Were Not. 9 good Statis: cal Fit (0.87). There  The graph-cul mathod had to be used.  O 2,127 gen Tio=167 min (Appendix C, P.C-9, C-10)  Determination OF 1/2 mass Recovery:  The First Part OF Determining & Mass Recovered  IS calculations mass in Jected  mass in Jected  mass in Jected (Insection Feed Rate) (Time insected)  = 620.8 pt (17.69 F) (10 min) (360 min)									
The data From the 2/23/95 Tracer Test  Were Not. 9 8000 States cal Fit (0.87). There  The 9-aph-cut mathod had to be used.  Determination OF 1 Mass Recovery:  The First Part OF Determining & Mass Recovered  is calculations mass in Jected  mass in Jected = (in Jection Feed Rate) (Time in Jected  min (17.69 F) (1000mc) (360 min)									
Were Not. 9 good Statisical Fit (0.87). THENTER THE Graphical mathead had to be used.  Part of gen Tio = 167 min. (Appendix C, P. C-9, C-10)  Determination OF 1/2 mass Recovery;  The First Part OF Determining & mass Recovered  IS calculations mass in Jected  Mass in Jected = (in Jection Feed Rate) (Time in Sected)  = 600.8 ml (17.6.9 F) (1000ml) (360 min.)		,			1	1 1 1	· • • • • • • • • • • • • • • • • • • •	1	1 43.5
Were Not. 9 good Statisical Fit (0.87). THENTALE Graphical mathed had to be used.  Petermination OF Mimass Recovery;  The First Part OF Determining & Mass Recovered  IS calculations mass in Jection Feed Rate) (Time insected  mass insected = (insection Feed Rate) (Time insected)  = 620.8 pt (17.6.9 F) (1000mc) (360 min.)		THe de	ita Fro	n' THE	13/2	3/95	ブン	acer Ta	=57
THE 9-upth-cul multion had to be used.  Q 2,107 gan Tio = 167 min (Appendix C, P. C-9, C-10)  Ditermination OF 1/2 mass Recovery;  The First Part OF Determining & Mass Recovered  is calculations mass in Jected  mass in Jected = (in Jection Feed Rate) (Time in Jected  min (17.69 F) (1000mc) (360 min)		Were	NOT. 9	800d S	797.5	: ca/:	FiT	(0.87)	THEF
Determination OF 11 mass Recovery:  The First Part OF Determining & Mass Recovered  is calculations mass in Jected  mass in Jected = (in Jection Feed Rate) (Time in Jected  in in (1 1000mc) (360 min)		THE 9-	uphicul	meTHOO	1. he	acl 1. To	be	used.	
DeTermination OF 1 mass Recovery;  The First Part OF Determining & Mass Recovered  is calculations mass in Jection Feed Rate) (Time in Sected  mass - Jected = (in Jection Feed Rate) (Time in Sected  in the first of the following in the first of the information feed Rate) (17.69 F) (1000mm)		•	;	;				•	
DeTermination OF 1 mass Recovery;  The First Part OF Determining & Mass Recovered  is calculations mass in Jection Feed Rate) (Time in Sected  mass - Jected = (in Jection Feed Rate) (Time in Sected  in the first of the following in the first of the information feed Rate) (17.69 F) (1000mm)		· · · · · · · · · · · · · · · · · · ·	10 J127	gpm Th	5_76	-m.n.	. (Appe	nclix C, P	C-9, C-10
THE FIRT PAIT OF DETERMINING & MUSS RECOVERED  IS CALCULATIONS MUSS IN JECTED  MUSS Jectula = (in Jection Feed Rute) (Time in Jected  inin (17.69 F) (1000000) (360 min)	· -		·		<del> </del>		\		
THE FIRST PAIT OF DETERMINING & MUSS RECOVERED  IS CALCULATIONS MUSS IN JECTED  MUSS Jecture = (in Jection Feed Rute) (Time in Jected  inin (17.69 F) (1000mc) (360 min)	1.7	خوت کو طاع میں	25 % ma				,	·	
mass intected = (intection Feed Rate) (Time intected)  = 620.8 ml (17.6.9 F) (1000ml) (360 min)	Devel	mina 1,001	OP 10, Pia	55 REC	overy	<i>i</i>	- :		
mass intected = (intection Feed Rate) (Time intected)  = 620.8 ml (17.6.9 F) (1000ml) (360 min)	!	THO	First P	W7 OF	Detec	رند. بهرمنا مدنده	1 mi	ee O.	
mass in Jeczed = (in Jection Feed Rute) (Time in Jected) $= 600.8  \text{nL} \left( \frac{17.69}{\text{linin}} \right) \left( \frac{18}{\text{locone}} \right) \left( \frac{360}{\text{min}} \right)$		15 6	ale what on	a mage		Tonte	1	23_76CO)	27.00
$=620.8 \text{ nc} \left(\frac{17.69 \text{ F}}{L}\right) \left(16000000000000000000000000000000000000$									
$=620.8 \text{ nc} \left(\frac{17.69 \text{ F}}{L}\right) \left(16000000000000000000000000000000000000$			mass -	JecTud.	= lins	Tion Fe.	ed Rut	Time	in Texted
	'- ;-				) (			M	
				1				۔ سیدینوں سر سہ سے	
	· · · · · · · · · · · · · · · · · · ·	<u> </u>		=620.81	<u> 17 / کو</u>	69F/	<u>le</u>	-1/ 36	Onin.
			ļ <u>-</u>		9:0	6 1	100000	= /	
@ 2,380gm Mass. inJected = 3,933.9		- <del>-</del>							
( 5) 38 49 m 10455. 11 Salat - 2) 1 3 5: 9	a a	7 700		-70		: .		•	
		0, 28,08 m	ass indulal		5:9				
			· ·		!				:
				•	<u>.</u>	!		•	

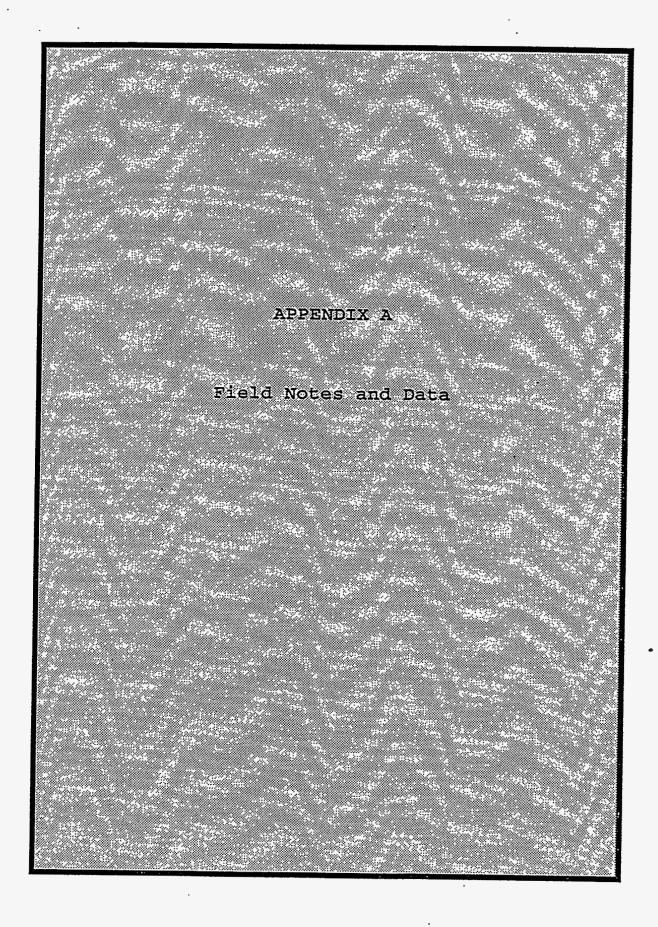
A-6

KAISER ENGIN	NEERS		Calc. No. <u>ER5490-6-00 7</u>
	DESIGN A	ANALYSIS .	Revision O Page No. 7 of /O
Client ICF-KH		WO/Job No. ER5480	
I '	Ty ReTention	Date 3/37/45 By Checked 3/31/95 By	William Kr Picket
Location 300 A		Checked 3/31/95 By Revised By	J. W. Tash
Mass Recovery	ConT		
1 7	ination OF Ma		
	1955 Recovered 15		e Termina THE
	area under T		
STER	dose carve.		
Tacklair	que culled The	Will a name	exical integration
- Colina	li l	Lecz gagie ran	
THE	Flourde Concent	47,00 a7 THE	end of a
Time	interval is mo	ITiplied Times	THE Time
inter	al To obtain	an incres	rental Acca.
Oar	March 6, 1995 1	3:40 Example	
	Incrimental area	= Sampling Time	Interval X Flyoride
		(0.7 (O.7	(076
		(300-195 min) (0.1	:
		3.5 mg.min	(ReF. 2 P. C-21)
		1	
·		مصانی	
and	74 To Tal	las are sam	amed and
		aned les ter	
	To Tal AREA =	3.70 mg.min/	Appendix B, P. B-3)
	ويوان والمراجع بمريبونية بالمراجع والمراجع المحاجم الم		ere - de e e e e e e e e e e e e e e e e e
///3	Muss Recovered	can now be	_detemined
	Total Mass Recovered	= ToTUL AREA	(grerage Flow)
	= (370 mg·min)	19 / 90092	.)
			<b>\</b>
	= 3,333	9, (	REF. D. C-23)
	,	. fare-america en la seconda far de la la	
To Rece	ver = Mass Rea muss in	overed - X 600	:
	í	00100	
@ 2,380 gpm 81	Romey = 85%		: :
·		/	
C -1127 9pm. 70	Recovery = 45% A-7		54-4300-037 KEH-0037.00 (06/92)

KAIS		NGINEE	RS		•				R5480	-6-W
			D	ESIGN .	ANALYSIS			ision e No.	<u>8</u> (	of 10
Client	FCF-	-KH			WO/Job No	ERS.				
Subject			ReTention	~	Date 3/2	7/95	By 1/1:10	lidas to	1 1:0	Ke77
		Facility Time	•		Checked 3/	31/95		w. F	u.L	<u> </u>
Location		300 H	REA		Revised		By 🖊			
1-:	11:		]     1	111		11!	1 1 1	! i :	· [	1 1 1
	De Tein	instion	OF To	aT	any F	Tow!	10 7	He 3	15	• • • • • • • • • • • • • • • • • • • •
			45:001				4 1345	505	, ,	
<u>i                                    </u>	!!i_	1.: 1	: 1 : 1 !	1 1	1 1 1	1 1 1	1	<del>,                                    </del>		
<u> </u>	Tiolis	5 invers	ely prop	00-7.00	al To	Flor	Rate	74.0	Fre	THE
<u> </u>	aT a	Flow rut	e oTHE	7600	74.7	4/4:0	4 7/16	بېرىن ئىلىرى مەم ئىدىل		Territori
;	Wasi	107/40	ted Lyn	4	determin	26	100 - 711	7//-	E. /	Gay
. 1	1 1			7			1 1	1.77	1 !	בויייוס
:	- T	TIDO	-= 17107	1/10	7)	111		<del></del>	;	<u> </u>
		17063.	1-1-10-7	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	子丁二	TIT		<del></del>	·	·
				4	T-1-1-	TiT	<del>                                      </del>	<u> </u>		
2. F2:	P1-2!	WHe			7			ļ	7 -	<del>-</del>
اريعسفا	ر در تعالم		, ,	_=	0 9T T	eacter.	= 74dy	HOW	Mate_	
					cacer s					<u></u>
		: .:		= $A$	NY SY	S.Ten_	Flow	Kale		- · · · ·
	<del>~~~~~</del> ~		TIORQ	= -7	10_a7_a	10.1/2.5.	ystem.	:. F/01	Z Ra	7e
				<u>-                                    </u>	1-00			<u>ļ.</u>		
<u> </u>	tron	Mey,ou	ション・1万.	o. &	2,38019	pm =	107m			<u>i. ,i</u>
ــــــــــــــــــــــــــــــــــــــ			7.10	0.0.	2,127	3Pm=	167m	٠		,
	_				<u> </u>	_ !	:		<b></b>	
سداد دد	45,7	9 742	960re e	Quu 7	on land	d_ITH	c Tro	472	,380	ويدحرى
·	alc	alculated	70	can l	be dete	mine	V FO	V T	4e	7.127
	Flon	Rut	٠		_	1		. ,		Y)10 .
							•			•
	, Q. J	12 Topm TI	o : calculaz	e. —.	102/2:	380)				
,		- f .			2177					•
			; ;		, , ,	i	• •	•		:
	}		Tio ca	1/2 =	114.13	m-n				
	,						:	!		
,	1453	10 710	culc and	1 70	66 754	an	averan	T.		. /
		Torn med	and	1000	7 6-1	1.7.7		110	can.	oe.
	100%	Wi	9712	13+0	10 Car	caure	110_	1 100	-91	<u>د</u>
, ,	1. F0	10 7 /2	7		<del>                                     </del>	<u> </u>			•	
		7.0.	Tagen Tio	ac curl	16./	Mill _			* * *	
		110: Cal.C	ulated Fro	1380	1 mise	4.13mz	7			:
	-1		·		· <del>.</del>		· : ÷			<u> </u>
			7,	10	14/min	WHe	n Flow	三. みん	1279	100
;	†	·	<u> </u>	1 - 1		·				:
	AN	E Quation	1. is de velo	s sed	For a	1/2 - F	1645:			
		ر ا ا موسد دری درخست							***	
		; ' '	Tin	2Q=	(141)(2):	7)	• •		·- •	
					O					
					,					
			Tio	Q Q:	= 300	000				
		• /				<del>ن ا</del>	-			
	Follow	1:110 35	a Plot of	= TU	culture	2				
	J., 0 6- 6	7.9 73	101 01	- (£4);	S. 41641	.001.	54-4300	0-037 K	EH-0037	.00 (06/9:
				A-8						_ ,_ ,_ ,_ ,

<i>A</i>	CAIS ANFO	ER	EN	GIN	IEE	RS	DI	ESIG	N A	.NAL	YSI.	s			R	alc. No evision ege No		C	)	
Si	ient ubject cation	315 TH	Fac	:/i7	7.7.	AR	7.c	1 :	nd	Chec Revis	ked sed	No. 3/31/4	1/95 95	480 - By By	IFO	oBB4 W://iva	r h			
	To 315 Filter Plant, 300 Area		Detention Time vs. Flow			1000 Two Flow Mean T₁o (min)= 300,000/Q <sub>gm</sub>			2 12 Curvo	Mean.T10		01				0 500 1000 1500 2000 2500 0.00 0.00 0.00 0.00 0.00 0		Prepared by ICF Kaiser	- The state of the	
	•							(nlm	) "L											

HANF			٧G	INE	EE	75										•	Calc	. No. ision	ER	3548°	30-6	-00
							•	D	ESIC	SN /	ANA	LYS	IS					e No.		<u> </u>	of	10
Client	IC	F-K	14								wo	/Job	No.	E 2-	2160	IE				<b></b>	•	
Subject		- Fa		77	Re	Ten	7.00		7.°m		Date		3/27					lium	1-1	رو تر	k-a	77
<del></del>	<u> </u>		-,,.	- / /-		, . , ,	70-7		****				3/31	195	E	3 <b>y</b>	1. v		F. D	110	ne.	
Location		300	5	ARE	A	***		-			Rev					3y -	<u> </u>			<del></del>		
			i	l i	1 1	j			( )	į	1 1	1	1 1	1	: :	1	!	1 !	Ī	, !	i	1 1
Con	0/4	520	25%		! !	ļ				$\top$	!	i	1	1	: ;	i	!	<del>                                     </del>	<del></del>	<del></del>	-	;
		}			: 1	ı				i	1 :				, ;	<del>-</del>	- <del></del> -	<u> </u>		; ;		<del></del>
	.	・ゴ	7/	2	13.	15	F	=:1	Ter	1	lan	T	ΤÍ	TII	656			91		†-T		! !
<u> </u>	•	10	e 7	en	7:0	0	1 -	موراً وس	125	· /-	7	_ /		* (i.s.	;	ري. سير	11/	1. S				
•   ; ;	1	;	i		. ;	Ī					1			- <b>-</b> -		- <b>/</b> , C	2.4.0	ديمي	- <del></del> -	<del></del>	<del>;-</del>	
i i i			7	-@	. 6	700	2.9	4.		123	800	i Om	)	- <u>÷</u> -	1/7	9.	- <del></del>	<del>!                                    </del>	- <del></del>	<u></u> -	<del>-</del>  -	<del></del> -
, ,			•		ر :			1.7. 6.2	7-1			المتعاد	1	<del></del> -	. / /. ! !	0 .Z	-	7	;	1 1	<del>-                                    </del>	<del></del>
			. 7	- D	' '	205		Yma	1/	2	27	000	<u>. 71</u>		1 9	g.	4 0	1 !	<del></del>	<del></del>		
	1	i	, '			!		<u> </u>	<u></u> (:	-41		<u> </u>	<i>T.J.</i>		J J-	-//	2./	<del>                                     </del>		7	{-	
		7	יון	01	7 /	-   1	主:力	<del>-</del> 1 -		01	17	1	<u> </u>		1/1	<del>-</del> -		Zen	<del></del>			<del>'</del>
			. ري. ا. س		1/3	(		7		100	7_/	<u> </u>	10.	cua	/- /	<del>-</del>	L/e	100	1.0	05	<del>-</del>	
111		<del></del>	مرار <u>ب</u> ا	ne	( 14	ـرن	,	120	1 1	95	++	- 1-0		<u>کیم</u> کا	5. <u></u> .							
1 1			<del></del>		<del>'</del>	20	0 9	<u> </u>	1_1	<u>i</u>	<del>!</del> +	<del>-</del>	100		<u>-::</u>	. <u>i</u> .	-/^	-ــــــــــــــــــــــــــــــــــــ	. : .	·	<del>7</del> }-	
		<del></del>	/ 1	هـ. <sub>,</sub> ه		7.00	J. 11.	7/1	2,24	- 3	71	/	$O_{\rho}$		7:1	) <u>.</u> _		e Te				
<del></del>		<del></del>	<del></del> ;	<del></del>		<del></del>			<u> </u>		<del></del> -			<u>j</u>	<del></del>		-(N	ume	1:4	<u>e//y</u>	-Ĵ-	
- <del> - - -</del>			<del></del>		<u> </u>	<u> </u>		11	<u> </u>	<del>-</del> ;-	<u> </u>		·	<del>_                                    </del>	<del></del>	· ', -		<u> </u>	<u>.</u>	۱ -ر-		· <u>·</u>
<del></del>				0_6	هٍ۔۔۔ٰ	<u> </u>	$\langle O \rangle$	7m	10	_	<del>-</del>	<u>. 1</u> 6	2/10	-لأرد				120			)_[_	
<del></del>					<del> !</del> -		<u>;                                    </u>				<u> -                                   </u>	_ <u> </u>		_!	- '	. ţ	610	PHIC	call	ر پا	/ i	. :
			<u></u>				<u>!!</u> -	<del></del>	<u> </u>	-;	i		<u> </u>	Ì_	_ :.	! 		<u>!</u>				
			H. e	<u>-</u>	M?	755.	<u> </u>	Kec	cok	ربي	<u> </u>	0 /		TH	الم	ב:	レク	Jic	Te	<u>L</u>	: 	
			P4	46.	ا بر		1-1-	<u>i</u>	$\perp \mathcal{T}$	He	<u>:</u> :	. 3	15	_: /	5.1	Tes	<u> </u>	PI	m	7.	w.	
<u></u> '		: A	'.S;	j	FO	11.0	יאן כ	<u> </u>			;											
				001				<del></del>	,	ŗ,	;		<u> </u>					****	ت .		ι -	
ander and de			-: /	1),45	7	-1-1	أبره	de.	R	260	ver	ed.	$\omega_{\parallel}$	700	9 %	n i	3 Ξ	8.5	5/2	ź.,		
				<u> </u>		·- <u>·</u>	,	<del>``</del> _	·	<u>.</u>	<del> </del>	. , .	٠	 		<del>;</del>		! !			i 	
<del></del>				7.45	<u> </u>	<u> </u>	401	ML	<i>!</i>	reco	Vere	d	. E.	70	زقع	mi	Z = {	4	5.2	<u>6_</u>	1	
<del> </del>		يُنند فيست			:		! !	<u> </u>	! . } - <del></del> -	· -¦			:	1	· ;		!				-	, 
			7	<del>_</del>				<del></del> -	<del>!</del> ;	!	<del>                                     </del>		;	·	<b></b> !.			!	~ •••	· 		, I
	-	i_	10	Ten	1.101	<u>n:</u>	Z	me	<u> </u> `a	~ <u>~</u> _	an	! !/	FI	000			97	. Be				
<del></del>			Je:	721	4	red			Exc	201	1 : 2	7.4	ــــــــــــــــــــــــــــــــــــــ	F	110	زنها	20	<u>,                                     </u>	eæ	ua:	70	<del></del>
	-{				· - ·	!	<u> </u>	<del>-</del>  -	!	!	<u> </u>	-		į į	 	- <u> </u>	,		;	!	i	<u>:                                    </u>
		- 1	····	ļ	<u> </u>	·	7101	min	<u>)                                    </u>		00	000	2 !		:   :	. <u>.</u> . <u>.</u> .			;			1
		<u> </u>		·· <del>!</del> ··-	:			<del> </del>	; ; ;		'Q_	19/2	7.		:	<del>-</del>	:			:	1	
		· · · · · · · · · · · · · · · · · · ·	·	_	:_				<u>                                     </u>	<u>:</u>	<u> </u>			<u>. j</u>	, 	! 	!				Ī	
		<u>i</u>	<u> - :</u>		· 1			<u> </u>	: '		! '	, ,	. ·							• •	1	
	-\ <u>-</u> i-		i		!_				! 			;			:		:					
						:				ł			i	1 :				•-	•		÷	
	, . 					' '		• !			;	,			<u>:</u>		;				<del></del> -	
										,				- [		**			• •		<u></u>	
							]		,			•		:							: .	-
				;			i							:					• • • •			
				-	•		; :	;	~ =			٠.	•				•					• •••
				- <b>-</b> -	•		,			•	• -	•										
					-																-	



1-2-5-5-6-0-5-0-6-0-0-0-0-0-0-0-6-0-6-5-0-0-6	
2400 gpm 3/6 - Frace TesT	
Engineers: Will Picke77	
Told builder	
Dennis Cachala	
*Operators: Roy Hannord - had	
Lynn alums y kalve	
Lyanne Breviste	
· · · · · · · · · · · · · · · · · · ·	
OTHERS :	
Safty + Health Steve Stevenson	
4 Fili Tires San coup, 5m Duy, Du Gesson	
Basins on-line - 12,3,5/	
Filtus on-line - 112,3,4	
ALUM Dosage (PPM) - 20 PMM	
Required Interior Concentration (PM) - 125 Plan	
insection Flor Rate (m/min) - 620.8/	
Reagined Pump Speed Setting (6) 605	
90.641,7 = 1.08	
1.4-1.05= 0.32	

pre 506 8:00 - 9:00 Lord Sature 70, 9:10-9:30 Buck o ound established 10:00 FL 0.30 PPM -0.40 PM  $C_{i} = 1.5 + 0.1 - 0.35$ C:= 1.25 ppm Q 25ec7, on = 125- Flow . 0.2474 = 645.3 Pump speed 96 - Blodazon/99535 +1.311783 1.5= 66,14% @ Flag = 2,280 1 speed = 62.8% 10:10 K.WI Flow Ostubliffer PSSE7 62.5 % Flow = 620.7 mg/min Bunf Start from 10:00:45 OFF 7251 Over 9:20 10:20:45 4:20:00 .

A-A-2

`- <u>;</u>									
	CCO	( ( (-(		Tage .	0.0		000	000	
	· · · · · · · · · · · · · · · · · · ·	d				1 5	<u></u>		
			100 S			1			
		1-11-12	- (A)				) ) )		<b>.</b>
	" Decte	12 2	1/2	50/	÷\\	Ø (X	ر		
	- I	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	8 M			10			
	7 1	7 2	· O (	บ /ऱ	2	- 3	· · · ·	·	•
	9	Dase ("	1	<u>.</u>	293	BOFFE	, <del></del>	· <del>·</del> ·····	
	$\beta \cdots$	7.	77	Lyso O	77	Aumpoff	, <u></u>		
	$\mathcal{S}_{r}$		000	3	; \-3 !	1.62	··· ··· ·		
	12								
	in the							·	
	7 72	<u> </u>	12 pi	27 12	5.5.5 5.5.7	و پایتا	<u> </u>	37.57	5-0-1/
							30.00	37.78	12.7
	1 1 1 1		· .						
	Ahey			7c	15 P 15	200	ROK Y	ショウ で マック ショウ マ ト ト	1. J.
	13 13				7. %.0	، ین. می د	<i>٧٠٠</i> ٠٠٠/	y 60.69 4	y m' t
	なんのは							:	
	10 T	= -0000	احبا	ارم . (نه . لدير	41 63 g	£ 5	ずらん-	£ برا ا	ائماخ
		Y			9,				
	.:9		·					· · · · · ·	
		0	-5.80 0	110 130 130	134	7.0.2	76.6.	12 - 0 - 12 - 12 - 12 - 12 - 12 - 12 - 1	2.65
	·	• • • • •		· · · -		`		~~.~	-
7	· · · · · · · · · · · · · · · · · · ·			·-·				:-	

•	• •												
	1	i j	<u>,</u>						···· · • • • • • • • • • • • • • • • •			ر ار مرار	, ,
	280		7.	1									,
	6	975-Vision 9-25	, e	1			ļ .					8	
Ø-	11 Sept 11	8	<i>₩</i>			· 	 <del> </del>	··			- · ····	- <del>/</del>	
夏 <u>·</u>	7.		-3				<u> </u> 		· · ·			<i>®</i>	0.79
	-			<u> </u>	~		<del> </del>	•				<i>5</i> %	 
- -	-	<u></u>			<del></del>		<u> </u>	<del></del>	· ·		*******	Z	, <i>b</i>
%_ ***						·	<u>. i</u> .						0.99
		(D)		•••	• ••••		ì .	• ••••		<b></b> .		(	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
												1	11
							· ·			<b>-</b>			, > }l
	<b></b> .	415 to 0 min and middle		4-6-			<u>.</u>						> (v) =======
-		· 		1			<del></del>					· ···	
_	5	*,	<u> </u>	· · · · · · · · · · · · · · · · · · ·									<del>!</del>
	201	60000 6000	66	γίν	hoh	0 b s	<del> </del>		- <del>;</del>			٠٧	16. V
ל	洋	13.75 C	10 K	73	かない	95.	104	15.55 15.55 15.55 15.55	135.8 138.5	73,5	143.65 153.8	163.5	183
						• 1							
	100 E	3402	000	bo	シング かん	664	الأع	0	.00	96	) 	0 %	0 C
	-			4-7			7	0.70		~ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	: \( \sigma \)	9,3	
ى > آ	1	~ ~ ~ o	200 C	) <b>(</b>	500	-0 0 C	7	· · · ·					
4	4								3		27.5	Q-(	Э.Ö.
>	計る	3/60	5.81	8 6 7	348	404	20	2000	300	y. 8	8. 0 % 8. 0 %	À.Ś	5 5
	54 ~:-	en-Cali		7 € 60 € 3-60-€	~~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	`	(A)		٠٠٠/٠٠ (٠) - (٠)	٠,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		· (*)	).w.( ).w.(
	بر <del>ک</del>						i 🐪 \		1. 1.		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	٠, ١٠	

```~`)-@~@-\ <u>}-\</u> }-\ <del>`</del> @-\ <del>@</del> -\ <del>@-\</del> @-\ <del>@</del> -\ <del>@</del> -\ <del>@</del> -\ <del>@</del> -\ <del>@</del>
De la millione de la
0 8 8 8 8
W 6 W 5 3
g 1205 100 20 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
;
20 2 2 1 1 1 1 1 1 1 1 2 1 2 1 2 0 D
2 10 5 php 2 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
- 2000
10000000000000000000000000000000000000
7
200404000
113 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2

<u> </u>	1	·	•		
W	1686		: 		
	858 = 3 835 100 t 70		:  -  -  -		
,	200.	2380			
	a far	γ.			
		<u> </u>		· ~	
7					
67.2	366.5		-		
27.	5000	γ			
Ü	4/		<u> </u>	4	
14		•	1		
100	N'S				
F					
Ö		•			
2	1-1		<u>:</u> :		
F	000	٠.	•		
·					
4		· 	<u> </u>		
"in	10 M				<u>.</u>
17	488		C distance	·	

ICF KAISE	CF KAISER HANFORD COMPANY BACKROUND EIGURIDE CONCENTRATIONS										
DATE: 3/6	195	FACILITY: 3		- P14	n 7	300 AA	PEA				
TIME OF SAM		<u>9:30 - 09:</u>		<del></del>		<del> </del>	•				
SAMPLES TAP	TIME OF	WATER LEVEL	SYSTEM	SIGNITURE:	TEMP BEFORE	RESIDUAL	COMMENTS				
NUMBER	SAMPLE	IN CLEARWELL	FLOWRATE	ANALYSIS	TESTING	FLUORIDE					
#•B	(H:MM)	(FT)	(GPM)	(H:MM)	(F*)	(MG/L)					
J-B	09:38	(8, હ)	720	9:32		0,3	Bkgrl Test				
2-B	೮೪೫	10774	1163	9/38		0.4	lj.				
3-3	<u> </u>	16.81	1451	9:42		6,3	11				
YUB	07:45	10.89	1733	9:47		0.4	ji .				
3-B	09:53	B.78	302E	9:53		6.3	jı .				
( - B	०१:८३	10.82	၁၃५८	9:57		6,4	· ·				
				•							
57-2001:0001:000000000	zinaai oo oo oo oo	anamina morros es	mana mana sa birana ni ir a								
		806 S000 S000 S000 S000 S000 S000 S000 S		************		•					
	1000 Maria (1881)	20.8 S 27.3 S.									
Carrier Control		Maria Agresa		Professional Control							
AVERAGES		WATER LEVEL	SYSTEM FLOWRATE (GPM)		TEMP BEFORE TESTING (°F)	RESIDUAL FLUORIDE (MG/L)					

ICF KAISER HANFORD COMPANY  SHEET   OF 3										
		·				**************	TRACER TEST			
DATE: 3/6			•	er Pla		o ARea				
SAMPLES T		ennis Laubul	<u>a /w:// /.zk/~7</u> PUMP STROKE:	SOM	Dui Z	out 3	MA LESCH			
		LUORIDE TRACER:			·O					
SAMPLE	TIME OF	WATER LEVEL	SYSTEM	TIME OF	TEMP BEFORE	RESIDUAL	COMMENTS			
NUMBER	SAMPLE	IN CLEARWELL	FLOWRATE	ANALYSIS	TESTING	FLUORIDE				
#-T	(H:MM)	(FT)	(GPM)	(H:MM)	(F°)	(MG/L)	<u> </u>			
1 T	10:30	68,01	_2359	10:32	45	0,5				
8-7	10:H0	ाष्ट्र, ह	235H	10:42	45	025				
3~7	12:50	10.80	2344	10:52	44	04				
CIST	14:00	10.80	239∤	11202	44	6.4				
5- T	11:10	10,80	2408	11:12	44	10.4	·			
6- T	ાાજ	68,01	2411	ug2	44	0.4				
アー・て	11:30	10.80	2440	11:32	44	0.4	***************************************			
807	11:50	16,79	2447	11:41	44	0.5				
9- 7	11:50	10.79	2411	小えて	44	0.5				
13- T	12:0D	10.8	2433	12502	યેવ	0.5				
	12:10	10-80	2424	12:11	43					
616000000 1930 V	Modelant Sine	10.80	2424	13:22	<u> 43</u>	0.6				
	p:30	16.80	2408	12:32	43					
missions and a	00000 000000000 t Av. 10	16.86	2413	12.32	43	0.7	**************************************			
	D:40	1090		17.00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0.7				
1254	15012	10.79	uzanak pakanen	12:42	43	0.7	00000000000000000000000000000000000000			
17 -7	12:50	1	3456	10.7/	<u>43</u>	8.				
18 - 1	12:50	10.79	3931	10.55	42-	0.8				
	12:55	1080	3910	12:57	92	0.8				
7-19	<i>13:0</i> 0	10.80	2447	13:02	42	0-9				
	13:05		2459	13!:07	42	10				
2/-7	<i>13:10</i>	10.80	2437	13:13	42	0.9.				
32:00	13:15	10,79	2416	13:17	42	0.9 /20				
>31 )4/	13:20	10.80	7398	12:22	43	1.0				
9	13935	10-79	2403	13:27	43	1.0				
25	13:30	10,79	2408.	13:32	43	1.1				
96	/3:35	10.80	R VIII - A Company Common and	3:37	43					
	13:40	68,81		3:42	43	i.)				
8	13:45	10.80	Committee of the second second	3:47	402	1.1				
79	3、まつ	10,87		3:52	42	1.2				
And an extension to the second		Car of hill a comment of	and Albertan Charles and the con-	ระธก	43	water Stone of March				
	4:00			4:02	42	1.2				
- <b>-</b> 1			and the first of the second of	4:07	4/2	1.2	TO DESCRIPTION OF MENTALS.			
				4:17	42	1.3	2010年以及1987年1987年1987年1987年1987年1987年1987年1987年			
			1	1.10	1/2	(1)				

••;

ICF KAISER HANFORD COMPANY   FLUGRID TRACERTS     DATE	LOT KAN	SED HANG	CORD COMPA	NIV				SHEET 2 OF 3
EAMPLES TAKEN BY, Dr. of London (W. W. L. L. L. GENEWITURE)  PUMP SPEED: 62-57  PUMP STROKE: 50/6  SAMPLE IT ME OF WATER LEVEL  NUMBER AMPLE IT ME OF WATER LEVEL  NUMBER AMPLE IT ME OF WATER LEVEL  NUMBER (H. M. M.)  14'1/5		<del></del>	7		01.	7 0 2		Programme and the second
PUMP SPECT: 6-3-57							KIZA	2/11/11/11
TIME OF MAJECTION OF PLUCRIDE TRACER: 16:24-0-16:3-0-0   SAMPLE   TIME OF MATERIANEL   SYSTEM   TIME OF TEMP BEFORE   RESIDUAL   COMMENTS   SAMPLE   NO LEARWELL   FLOWRATE   GAPM   (P. MAGA)   SAMPLE   NO LEARWELL   GAPM   (P. MAGA)   SAMPLE   SAM		/ ^	5%			/~/~~	<u> </u>	y in princip
NUMBER SAMPLE (1-10) NO CLEARWELL (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-10) (1-	TIME OF IN	JECTION OF F	LUORIDE TRACER					
					i	1	1	COMMENTS
14'.15		1				F .		
St							(MG/L)	
32		200000000000000000000000000000000000000	100000000000000000000000000000000000000		1 20 2 10000 10 100	000,0000,000 10,000	113	
\$\frac{19.20}{9.8} \frac{10.8}{19.39} \frac{19.20}{10.79} \frac{10.79}{23.85} \frac{14.30}{19.38} \frac{1}{19.30} \frac{1}{10.79} \frac{23.85}{23.85} \frac{14.30}{19.38} \frac{1}{19.30} \frac{1}{10.38} \fra	***************************************					45	1 2	
\$\begin{array}{c c c c c c c c c c c c c c c c c c c		11 < 20220 / 12 22 20 20 20 20 20 20 20 20 20 20 20 20	10.8	2372	ACOMO DE SERVICIO	43	1.3	
51 1416 108 335 1472 42 1.3  140 14:45 10.8 2360 14:57 42 1.2  141 14:50 10.9 2374 14:57 42 1.4  142 14:55 10.79 2367 14:57 42 1.4  143 15:05 10.79 2370 15:07 42 1.4  144 15:05 10.79 2370 15:07 42 1.4  15:15 10.90 378 15:17 48 1.4  15:15 10.90 378 15:17 48 1.4  15:15 10.90 378 15:17 48 1.4  15:15 10.80 3393 15:32 42 1.4  15:15 10.80 3393 15:32 42 1.4  15:15 10.80 3393 15:32 42 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 2366 15:57 142 1.4  15:15 10.8 25 10.8 25 10.8  15:16 10.8 25 10.8  15:16 10.8 25 10.8  15:16 10.8 25 10.8  15:16 10.8 25 10.8  15:		1	1070	·2388-		4/2	1-3	
40		2000 ye 100 200 200 200 200 200 200 200 200 200	10 8	AAAA 1.40 1	9/20/00/20/00/20	45	1.5	
				V-10.700 - 100.5.57 110.7.7		617	1 7	. ' .
10	AA.2	548639750000000000000	Selected transportation (Co.) 1 606	SONNE SON CONTRACTOR AND PROPERTY (CO.)	\$60 \$10 co 8, 100 co.	42	1.9	
## 15:05 10.79 2370 15:07 42 1.4  ## 15:05 10.79 2370 15:07 42 1.4  ## 15:05 10.79 2378 15:17 48 1.4  ## 15:20 10.11 2375 15:22 42 1.4  ## 15:20 10.11 2375 15:22 42 1.4  ## 15:25 10.80 2384 15:27 42 1.5  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2384 15:37 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:22 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 15:25 10.80 2387 15:25 42 1.4  ## 25:25 10.80 2387 15:25 42 1.4  ## 25:25 10.80 2387 15:25 42 1.4  ## 25:25 10.80 2387 15:25 42 1.4  ## 25:25 10.80 2387 15:25 42 1.4  ## 25:25 10.80 2387 15:25 24 1.4  ## 25:25 10.80 25:25 25 1.4  ## 25:25 10.80 25:25 25 1.4  ## 25:25 10.80 2							I U	
대 IS:05 10.79 2370 IS:07 42 1.년  HS IS:10 10.79 2379 IS:12 42 1년  HS IS:15 10.80 3378 IS:17 48 1.년  HS IS:25 10.80 2395 IS:22 42 1년  HS IS:25 10.8 2389 IS:22 42 1년  SO IS:40 IS.8 2399 IS:22 42 1년  SO IS:40 IS.8 2399 IS:22 42 1년  SO IS:40 IS.8 2399 IS:22 42 1년  SO IS:40 IS.8 2394 IS:22 42 IS  SO IS:40 IS.8 2394 IS:22 42 IS  SO IS:40 IS.8 2394 IS:22 42 IS  SO IS:45 IS:45 IS:47 42 IS  SO IS:45 IS:45 IS:47 42 IS  SO IS:45 IS:45 IS:47 42 IS  SO IS:45 IS:47 IS:47 42 IS  SO IS:45 IS:45 IS:47 42 IS  SO IS:45 IS:47 IS:47 42 IS  SO IS:45 IS:47 IS:47 42 IS  SO IS:45 IS:47 IS:47 42 IS:47 42 IS  SO IS:45 IS:45 IS:45 IS:47 42 IS:47 42 IS  SO IS:45 IS:45 IS:45 IS:47 42 IS:47 42 IS  SO IS:45 IS:45 IS:45 IS:47 42 IS:47	Samment Control	2.70000 2000000000	22(2000,000,000,000,000,000,000,000)	245 . 41114 11 / 111141111 1 1 1	797.678.0000000000000000000000000000000000	011 MELTING ANAL-2001 (1981)	1.2	
#\$							1 4	
46	Cardonnaristana	www.ministricts	2000003/200000000/-000000000	SECURIO SE ANTONIO SE PARA LA CONTRA DE	consolitations, I come.	******* ***** **** ** *** * * * * * * *		
47 15 20 10 74 2555 15 32 42 1.4  48 15:25 10.80 255 15:37 42 1.4  49 15:30 10.80 255 15:32 42 1.4  50 15:40 15.8 2389 15:42 1.4  51 15:50 10.8 2366 15:52 42 1.4  52 16:00 10.8 2363 16:02 42 1.4  53 16:10 10.8 2391 16:10 42 1.4  54 16:20 10.8 2391 16:10 42 1.5  54 16:20 10.8 2391 16:02 42 1.4  55 10.8 2373 16:02 42 1.4  56 17:50 10.8 2373 16:02 42 1.4  57 17:00 10.8 2373 16:02 42 1.4  58 17:47 10.8 2366 17:33 42 1/4  59 17:47 10.8 2366 17:33 42 1/4  50 18:45 10.79 2342 17:47 42 1.3  60 18:50 10.79 2342 17:47 42 1.3  61 18:00 10:79 2342 17:47 42 1.3  62 18:45 10.79 2342 17:47 42 1.3  63 18:50 10:79 2342 17:47 42 1.3			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
18	WARRANCO AND	1686,6800,000,000	200000000000000000000000000000000000000	donne stowiczaniaczaniace iczczon 🛊	2/2/50xxxxxxxxxxxxxxx	JOSEPHA LITERATOR, NICHTSSONE SAGALIA.		
Har   15:50   10:80   13:93   15:32   142   144     SO   15:40   15:8   2389   15:42   144     SI   15:50   16:8   2368   13:52   142   144     ST   16:10   16:8   2368   13:52   142   144     ST   16:10   16:8   2341   16:22   142   144     ST   16:20   16:8   2341   16:22   142   142     ST   17:00   16:8   23:13   17:00   142   142     ST   17:47   10:8   23:13   17:00   142   142     ST   17:47   10:8   23:66   17:33   142   144     ST   17:47   16:47   17:47   142   13     ST   17:50   16:8   23:13   17:00   142   144     ST   17:47   10:8   23:66   17:33   142   144     ST   17:47   16:47   16:47   16:47     ST   17:47   16:47   16:47   16:47   16:47     ST   17:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16:47   16							.1 41	
SD 15:40 15.8 2389 15:42 1.4  S1 15:50 10.8 2368 15:52 H2 1.4  S2 16:00 10.8 2353 16:02 42 1.4  S3 16:00 10.8 2342 16:02 42 1.4  S4 16:20 10.8 2341 16:22 42 1.5  S4 16:20 10.8 2374 16:22 42 1.5  S5 16:30 10.8 2373 17:02 42 1.5  S6 17:49 10.8 2373 17:02 42 1.5  S7 17:00 10.8 2373 17:02 42 1.4  S8 17:49 10.8 2366 17:33 40 1/4  S6 17:45 10.79 2346 17:47 42 1.3  S6 18:47 10.79 2346 17:47 42 1.3	· Sand Aller Sand	w/www.www.ww	militario manda marcona 1	60006200000000000000000000000000000000	42/982/2004 STORY	a silia kan wa Masanda ama		
\$\ \begin{align*} \be	<u>క</u> ర	13:40				and the same same	1.4	
\$7	<b>\$</b> )	20,000,000,000,000	2005/2019/2016 - 21.2.5.20 . 1	Character announces	e60030000000000000000000000000000000000		114	
## 16:10 10.8 2341 16:12 92 1.4 15 Saturday turned of 16:20 10.8 2341 16:22 92 1.4 15 Saturday turned of 16:20 10.8 2374 16:22 16:47 42 1.5 17:00 10:8 2373 17:00 42 1.4 18:47 16:4 16:4 16:4 16:4 16:4 16:4 16:4 16:4	<b>উ</b> ጉ	16:00					1,41	•
54 16:20 10.8 2341 16:22 42 1.5 Seturates turnol as 16:30 10.8 2343 16:47 42 1.5  51 17:00 10.8 2373 17:00 42 1.4  2 17:47 10.8 2352 17:17 42 1.4  55 17:30 10.8 2366 17:33 42 14  60 19:45 10.79 2342 17:47 42 1.3  61 18:00 10.80 2351 18:00 42 1.3  62 18:45 10.79 2332 18:17 42 1.2  63 18:45 10.79 2343 18:32 42 1.2	53		COCCOMPOSION IN CONTRACTOR AND A P. A.	SCHOOL ACCOUNT COMMON SCHOOL TO	erforge an opening a be			
10.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8   0.8		16:20	10.8					< d - 1 . T
18:45   D. 8   2383   18:47   42   1.5     17:00   10:8   2373   17:02   42   1.4     2	35	400000000 10/00 to 50/100 to \$4	contractorioù-our : erectorien 14.	14 20 20 Villa 200 Villa 3	KO YOUCHS SCHOOL SUITS AS		1.4	TELL SIGN ON
17:49   10.8   2352   17:17   42   1.49   16:45   10.79   2346   17:33   42   149   16:45   10.79   2346   17:47   42   1.3   1.3   18:45   10:79   2332   18:17   42   1.2   1.3   18:20   10:79   2332   18:17   42   1.2   1.3   18:45   10:79   2342   18:47   42   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0   1.0	52	1845	10.8				1.5	
17:39   10.8   2352   17:17   42   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49   1.49	STI.	17300	1018	SARANSKA SARANGA AND SARANA S	diameter differential to		14	
(2) 19:45 10.79 2346 17:47 42 1.3 61 18:00 10:80 2351 18:00 42 1.3 62 18:15 10:79 2332 18:17 42 1.2 83 18:20 10:79 2343 18:52 42 1.1	25	17:15		7352				
(2) 19:45 10.79 2346 17:47 42 1.3 61 8:00 1080 2351 18:00 43 1.3 62 18:15 10:79 2332 18:17 42 1.2 83:18:20 10:79 2343 18:37 42 1.0	55	17:30	10.8	2366			19	
61 18:00 1080 2351 18:00 43 62 18:15 10:79 3333 18:17 43 1.3 83 18:20 10:79 3393 18:32 43 1.1 64 18:45 10:79 3343 18:47 43 1.0	<b>⊗</b>	4 4	10.79		17:47		1,3	
67 18:15 10:79 3337 18:17 47 1.7 83 18:20 10:79 0393 18:32 47 1.7 24 18:45 10:79 3347 18:47 47 1.0		8:00		A 12 7 7	comment of a secondaria comment		1.3	
55 1830 10279 0393 1832 42 121 64 18:45 10279 2342 18:47 42 1.0	62	18:15	10.79	3332			1.2	***************************************
64 18:45 10.79 2342 18:47 47 1.0		18.30		0343	NAME OF TAXABLE AND ADDRESS OF TAXABLE PARTY.	4)	12/	
65 19:00 10:80 2341 19:02 47 0.9	4			2342		47	1.0	24. 21. 22.00000000000000
				234	19:02	42		
14 19:15 10.80 3337 19:17 42 0.9	là	19:15	10.80					A S T S W N NOT CONTA

500

					\		SHEET 3 OF 3
ICF KAIS	ER HANF	ORD COMPA	NY .				TRACERITEST
DATE: 3/6	195	FACILITY: 3/5	- Filter	Plan	7 300	AREA	
		nais Luuhalu	Swill Pickett	SIGNITURE:	Dung	Laki .	Will fielet
	D: 62-5		PUMP STROKE:	50%	<del> </del>	<u> </u>	
		LUORIDE TRACER:			l		
SAMPLE	TIME OF	WATER LEVEL	SYSTEM	TIME OF	TEMP BEFORE	RESIDUAL	COMMENTS
NUMBER	SAMPLE	IN CLEARWELL	FLOWRATE	ANALYSIS	TESTING	FLUORIDE (MG/L)	
#-T	(H:MM)	(FT)	(GPM)	(H:MM)	(F°)		
67	19:30	10,79	2345	19:32	42_	0.8	
68	19245	10.8	2339	19747	92	0.7	
69	20:00	10.5	2341	20-02	42_	0.7	
าอ	20115	6.8	2329	26.16	43	0.7	
71	20:30	10.8	2337	20.31	43	0.6	
200 100 200 200 200 200	36:HS	9.8	2334	30.47	42	0.6	
73	21:00	15.8	2328	21.02	42	0,5	
A	Access Subbassions		new restriction and a restriction reserves.	21.17	43	0.5	Plan 7 5/147 6500
21/51/2000	21- Iざ <u>.</u>	10-79	2340	(d) 5/1/1/1/1/1			
*20000000000	20.33206.30233.3023						
				,	70		
	10 8	594.		44	. 35-		
	27.7	2330			G.		
		714		42	20.7		
					-		
30.770,700,000							
	200.20.00000			Adaid Adad Sandra			
			/				
			***************************************				
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				************			
		•					
					70.00		
htekatika sessi	ar ang anima ana		\$\$\$ \$ 100 may		20072	ar strategists s	wido.de.1994. a.d. 157
		<del></del>		<del>.,</del>			

1-1-22-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	12-2-2-2-2-2-2-2-2-2
3/23/95 2/160	6pm Tracer TesT
•	
Entering the second	111-
	Picke 77
Denn.	's Lalihula
Operators: Roy A	Fammond
	Brenster
Lynn	allams
•	Boure
	20222
OTHERS: Sun	Camp
Lynn	Kelly
-	
	Puy
Dan (	Sleuson
Bure	/ ) 3 ()
Busins on line?	(14, 3, 4
Filters on line:	1,2,3,4
alum Dosage: 3	15 Pm
F Loss Due To Alam:	
SS UGE 18 HUAM.	.0.13 = 0.20 ypm
	<u></u>

0-6-6-6-6-6-6-6-6-0-0-0-0-0-0-0-0-6-6-6-6-6-6-6-6-6	<u>.</u>
	ار در
Test Start Time 8:54 (crank value)	 
F Background Established: 9:12	
P Dack ground Established . 1.12	—— <u>;</u> ;;
F Background Conc: 0.4mg/e	
2160 grm estublished: 9:25	
!	
T	°
In Declion Concentration:	
In Jection Concentration:  C: - Desired Effluent + Alum Loss - Buckgrame	1
!	
Ci = 1.5 + 0.75 - 0.4	
C:=1.3-5 mo/L	 5,
. :	: :::::::::::::::::::::::::::::::
Calculated Intection Flow Rate:	
Q: = C: . Flow . 0.21474	
Q:=1.25.2160.0.21474	
Q: - 580 mc/m:n	:
Pump Speed	
actual In Jection Flow Rate: = 55-56	
V. V2 AV Time sulmin	
1000 425 575 60.05 575.	Ä
1000 410 590 60.20 588	***
1000 470 580 60.20 578	·····
5 /8	🤾
Insurion Flow Rate = 580 m/mm	: 

デンプタラーシーシーシーシー	<u> </u>	いりをある。
Insetion Sta	17 Time: 9:50:00	
	ine: 16:25:00	
Test Ove.	r: 21:30:00	
	-	
	:	
	· · · · · · · · · · · · · · · · · · ·	
	· :	
	:	
	**	
	<u>'.</u>	
	<u> </u>	
	!	
	<u>:</u> .	
	:	
· · · · · · · · · · · · · · · · · · ·		
	· :	
TO THE STATE OF THE STATE OF		

ICF KAISER HANFORD COMPANY BACKROUND FLOURIDE CONCENTRATIONS										
DATE: 3/a		FACILITY: 3/		*************		300 AR				
TIME OF SAM	PLING:	8145-	- 9:10							
SAMPLES TAI	KEN BY: //O	MATER LEVEL	SYSTEM	SIGNITURE:	TEMP BEFORE	RESIDUAL	COMMENTS			
NUMBER	SAMPLE	IN CLEARWELL	FLOWRATE	ANALYSIS	TESTING	FLUORIDE				
#-B	(H:MM)	(FT)	(GPM)	(H:MM)	(F*)	(MG/L)				
j	<b>১:</b> ৭১	18,01	495	४: 47	<u> 30 · </u>	0.3	**************************************			
2	<b>\$</b> 150	10.79	493	8:51	SO	G.H				
3	હામ્ક	18.01	438	8:57	<i>S</i> ව	0,4				
4	৭:১ <b>৫</b>	16,97	775	9:02	49	0.4				
Š	9:08	10.79	81CI	9:07	48	0.4				
ے	9:10	10.79	1547	9:12	ન§	0.3				
		70,000	. , , , , , , , , , , , , , , , , , , ,		3.0 00 000 0.000 0.00					
							l			
				300000 a v no mon	W-0000 0000 000000	5.000000000000000000000000000000000000	J86868043694-86612703896-0-66600-7-4-2-2-			
						•	2			
AVERAGES		WATER LEVEL IN CLEARWELL (FT)	SYSTEM FLOWRATE (GPM)		TEMP BEFORE TESTING (°F)	RESIDUAL FLUORIDE (MG/L)				
	A STATE OF THE STATE OF			- 10 C 10						

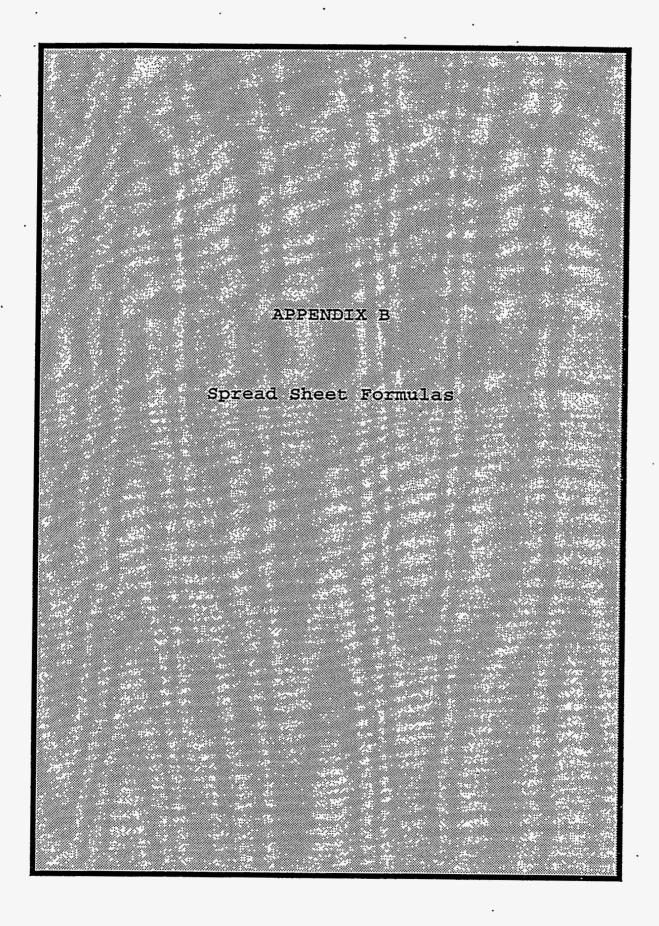
SHEET ) OF 3

			<del>,                                     </del>		SHEET / OF			
		ORD COMPA	NY .			FLUORIDE	TRACERITEST	
DATE: 3/2		FACILITY: 3/	5 Filter	Man	7		10000	
	~	<u> </u>	vill Pickett	SIGNITURE:	Zhuni ;	L. Ir	/ Vellin worself	
PUMP SPEE		70 LUORIDE TRACER:	9:50-1	50%	···			
SAMPLE	TIME OF	WATER LEVEL	SYSTEM	TIME OF	TEMP BEFORE	RESIDUAL	COMMENTS	
NUMBER	SAMPLE	IN CLEARWELL	FLOWRATE	ANALYSIS	TESTING	FLUORIDE	1	
#-T	(H:MM)	(FT)	(GPM)	(H:MM)	(F*)	(MG/L)	Start Saturala 09:50	
1	16:25	16.79	2161	(U:U)	47	0,3		
2	ال (دوا	[c.8]	3106	locia	45	6.4		
3	ju:20	10,79	2108	10:32	47	0.4		
4	מב.טו	63.01	2092	(d):39	46	0.4		
5	10:40	10.8D	2105	10:42	46	0.4		
6	10:50	10,52	2159	10:52	46	G.H		
7	וו:טט	(0.80	. 2118	11:02	46	0.4		
8	11:40	J0,9≿	8134	11/12	45	0.4		
9	11:20	10.58	2133	h:32	46	0.4		
10	11:3D	10,80	2183	11) 33.	46	0,4		
1)	11:40	BZ.01	2098	ii:ゼン	46	G.4		
12	1;52	10.20	2172	1052	45	0.5		
13	12,50	<u> </u>	215D	, , , , , , , , , , , , , , , , , , , ,	45	0.5		
1H	12:05	10.80	3138	13:02	45	300000000000000000000000000000000000000		
চ	12:12	(స.కర		12:07		<u> </u>		
16	1205	ulane anomali alamida.	Z120	12:12	45	0.5 6.1		
		PC.0	2118	33/17	45	G,H		
ς; (1)	15:50	18,81	2160	13:93	45	0.4	\$2000000000000000000000000000000000000	
38	13:23	16 (80	2138	(12:37) 	95	೦.೯		
19	व्हःदा	७८.७	Q135	12:32	<u>45</u>	0,5	Solicitions and John Color of the Solicition	
	12735		214/6	2.37	45	0-5		
21	12:40	10-8	2148	13:42	45	0.5		
22	12:45	10.8	2176	19:47	45	0.5		
83	12.50	10.8	2184	17:57	45	0.5		
	12:55	10.4	2143	257	44	1.5		
ನಿತ	13:00	10.8	2138	13.00	,44	0.6		
34	13:05	(0.8	2165	13:07	45	0-5		
ลา	1310	10.8	2/70	13:12	45	0.6		
25	1315	1079	<i>Ə</i> 239	13:17	45	0-6		
25	13:00	16.80	2182	13:22	45	0.7		
<u>ී</u>	3:25	10.81	2663	13:27	45	6.7		
31	13:30	63,01		13:32	45	0.7		
32/	3:35			13.37	45	0.7		
	13,40	10.50	~	13:43	6/5	0-7	1000-1014 401 (1000-1019) (1000-1019) (1000-1019)	
/		10.30				0-7		

,					·,,		SHEET A OF >
ICF KAIS	SER HANF	ORD COMPA	NY .			FLUORIDI	TRACERTEST
DATE: 3/a	3/95	FACILITY: 3/s	Filter	flant			
SAMPLES T	AKEN BY: De	711-5 Lachela	Willicker	SIGNITURE:	·Dané	L. LA	1 Willow Whiefeld
PUMP SPEE			PUMP STROKE:	50%	`		
		LUORIDE TRACER:		<del></del>			
SAMPLE	TIME OF	WATER LEVEL	SYSTEM	TIME OF	TEMP BEFORE	RESIDUAL	COMMENTS
NUMBER #-T	SAMPLE	IN CLEARWELL	FLOWRATE	ANALYSIS	TESTING	FLUORIDE	
	(H:MM)	(FT)	(GPM)	(H:MM)	(F*)	(MG/L)	
34	13-75	10,79	2200	13:47	46	0. <	5 (0.500,000,000)
35	13:50	10.81	e/s()	13.53	44	0.8	
36	13:55	10,78	2059	13:58	4/4/	0.2	•
37	19200	10.78	2022	14:02	45	0.7	
38	14:05	10.80	2136	14:07	45	0.7	
29	14:16	19 83	2117	14:13	45	6,9	
40	14:15	(3.88	2187	14:17	48	0.7	
::::27:::05200000	14:20	เชาร	3363	14:32	45	0.8	
47	K4:25	6.85	8185	ぱなっ	46	0,8	2.0300000000000000000000000000000000000
5000.50000000000	14.03	10.50	2007/2007/00/2007/2007/2007/2007/2007/2	220,000,200,200,200,000	45	20000-0000000-0000-0000	
43		7()	319Q	14:33	7 11.7 1 2 2 2 2 2 2 2 2 2	0.7	
30 (000, 5) (00, 000, 000, 000, 000, 000, 000, 000	14:35	16.১১	<u> २०</u> ४८	i4.37	_ 45	<u> </u>	900.00 S5 790.0. 0.0.0.0. 900.000.00
95	14540	10.50	2101	14:42	45	0.7	
46	4:45	10.80	2115	14:47	45	9,0	
47	141.50	16.50	Páis	15:53	५४	0.8	
48	14:55	68.01	2111	14:57	45	0.9	
49	15:00	() 80	<i>21</i> 00	15:07	45	6,1	
50	15:05	68.01	2113	15:07	45	1.0	
Si	15:10	10.81	2141	15১%	45	1,1	
52	15:15	10.20	2163	15:17	45	i.ک	200000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
A Company and the second of the	15:20	16.90	00.700°,00000000000000000000000000000000	15:27	45	1.0	
	15: 25	10.80					
600000000000000000000000000000000000000	15: 30	27/10/04/04/20/20/04/20/20/20/20/20/20/20/20/20/20/20/20/20/	90×9000000063640000000.10	18:27	45	1.1	
		10.50		15:32	45	<u>G</u> vi	
56	<i>15:35</i>	19.80	2132	15:37	45	6.1	
	1540	10.80	21//	18:40	46	1.1	
Section Assessment Commencer Land	15:45	10,80	2114 .	15:48	45	0.9.	
	15: 50	10.84	7/06	15:52	46	10	
APRILLADAMAN STREET, A C.	15:55	10.79	2126	13:57	45	isi	
61	18:00	16.80	Control of the Contro	6102	46	la	
62	16:05	16.80		16:07	45	1.1	
	16210	10.इ.८	#35************************************	16:12	45	1.7	
	6:15	10.20		6.17	46		
100 10 100 100 100 10	6.20	18,88	"R " North William and automorphism	6132	Approximate Approximate Control 1 to	_ ,    ::::::::::::::::::::::::::::::::::	M64224603889866699988
	6:25	10.82		C: 3フ	45	1.2	
1/	0.0 1	10.62	11 (110	6. 47	45 .	1.2	Daturator Off

SHEET 3 OF 3

ICF KAIS	ER HANF	ORD COMPA	NY .			FLUCRUE	TRACERIEST
DATE: 3/8		FACILITY: 3	15 F:17V	Plan	<del>*</del>	•	· ,
	KEN BY:	mis Lycholy/	Willeker?	SIGNITURE:	Dui o	Lull 1	withour fulto
PUMP SPEE			PUMP STROKE:	50%			
	TIME OF	UORIDE TRACER:	9:50 -16 SYSTEM	TIME OF	TEMP BEFORE	RESIDUAL	COMMENTS
SAMPLE NUMBER	SAMPLE	IN CLEARWELL	FLOWRATE	ANALYSIS	TESTING	FLUORIDE	o similari o
#-T	(H:MM)	(FT)	(GPM)	(H:MM)	(F*)	(MG/L) ·	
67	16:30	68,01	2115	16:30	45	1.0	
68	1/2-435	ic.92)	Q131	16:47	-15	1,0	
69	14:00	10.82	7153	17:02	45	1.8	
- <b>1</b> et exceptions (2000 € 60 € 60 €	กะเธ	(రి. 20	2108	רובת	45	1.0	
71	17:30	68.01	2112	17:32	45	1.0	
72	17:45	10-80	2108	17:48	45	1,0	
73	18:00	10.80	2088	18:05	45	1.0	•
74/	18:15	10-80	2127	18:19	45	1.0	
25	18:20	10.80	2131	18:33	45	0.8	
76	18:45	10-81	2124	18:27	45	1.0	
フブ	19:00	10.80	3/40	19:03	45	0.8	
74	19:18	10.FO.	2/40	19:18	45	0.8	
74	19:30	16.80	2129	19:33	46	0.9	
80	19:45	10.80	2134	19:77	46	0.0	
81	20:00	10.80	2142	20:02	. 45	0.6	
82	20:15		2126	20:17	45	0.8	
83	20730	10.80	2/37	20:33	45	0.0	>? Next Reagan T St
84	20:40	10.80	2131	20243	45	0.6	Changed Zero Gazy
	20:45	10-80	2126	20:47	45	0.6	28:40
86	21:00	10.80	2120	Charles To Company of the Company	45	0.4	(0.6)
87	21:15	10-80	206	21:17	45	0.4	
88	31:30	10.80	2119	21:32	45	0.4	
89	2145	•					•
	22:00				97	14/	
	10.12.	10.5.7			46	736	
	la.fr	54.05			4//	7,970	
	10.8	788.4			401	280	•
	10.00	97,09					
			į				



<b> </b>	Α	В	<u> </u>	Đ	E	F F	G	1 н	1		К	L	M
. ,	ICF KAI		•								240		
2	Date:	34764			-				entration (Baseline)=				
3			ge test flow =		=D3°3.785306	de loss due to alum ~ 0.1 = J3/J4 oride Dosage (Co) = 620.78 =\$I\$4*17.6/\$E\$3							
4 5	<u> </u>			Theoretical Resedence Time (T)=	=1605000/\$E\$3	<del> </del>	<del> </del>	onde Dosage (Co) =	620.78	=3134-17.0/3633			
6					<b>5</b> 7	Fluoride	Тгасег	Incrimental	Cumulative	• 6/0-	4.610-	1 4 675-)	102
7		Time	Time t (h:mm)	Time t (min)	Flowrate (gpm)	Measured (mg/L)	concentration (mg/L)	Area (mg-mln/L)	Area (mg-min/L)	C/Co	1-C/Co	Log <sub>10</sub> (1-C/Co)	ντ
9	Background	0 395833333	(United by		720	0.3	0	N/A	N/A				
10		0.399305555			1163	0.4	0	N/A	N/A N/A	ļ	ļ		
11		0.402777777 0.40625	<del></del>		1451 1733	0.3	0 .	N/A N/A	N/A N/A		<del> </del>		
13		0.409722222			2028	0.3	ō	N/A	N/A				
14		0.413194444			2240	0.4	0	N/A	N/A				
15					2404					ļ	ļ		
16	Start injection	0.423811111	=B17-\$B\$17	0	2404	<del>                                     </del>			0	<del> </del>		<del> </del>	
1B	Start Injection	0.4375	=B18-\$B\$17		2359	0.5	=F18-0.4	o	=I17+H18	=G18/\$J\$4	=1-J18	=LOG10(K18)	=D18/SE\$4
19			=B19-\$B\$17		2354	0.5	=F19-0.4	=G19*(D19-D18)	=I18+H19	=G19/\$J\$4	=1-J19	=LOG10(K19)	
20			=B20-\$B\$17		2344 2398	0.4	=F20-0.4	=G20*(D20-D19)	=119+H20 =120+H21	=G20/\$J\$4 =G21/\$J\$4	=1-J20 =1-J21	=LOG10(K20) =LOG10(K21)	
21			=B21-\$B\$17 =B22-\$B\$17		2408	0.4	=F21-0.4 =F22-0.4	=G21*(D21-D20) =G22*(D22-D21)	=120+H21 =121+H22	=G22/\$J\$4 =G22/\$J\$4	=1-J21	=LOG10(K21)	
23			=B23-\$B\$17		2411	0.4	=F23-0.4	=G23*(D23-D22)	=122+H23	=G23/\$J\$4	=1-J23	=LOG10(K23)	=D23/\$E\$4
24		0.479166666	=B24-\$B\$17	70	2440	0.4	=F24-0.4	=G24°(D24-D23)	=123+H24	=G24/\$J\$4	=1-J24	=LOG10(K24)	
25 26			=B25-\$B\$17 =B26-\$B\$17		2441 2411	0.5 0.5	=F25-0.4 =F26-0.4	=G25*(D25-D24) =G26*(D26-D25)	=124+H25 =125+H26	=G25/\$J\$4 =G26/\$J\$4	=1-J25 =1-J26	=LOG10(K25) =LOG10(K26)	
27		0.493033333	=B27-\$B\$17		2433	0.5	=F27-0.4	=G27*(D27-D28)	=126+H27	=G27/\$J\$4	=1-J27	=LOG10(K27)	
28		0.506944444	=B28-\$B\$17	110	2424	0.6	=F28-0.4	=G28*(D28-D27)	=I27+H28	=G28/\$J\$4	=1-J28	=LOG10(K28)	=D28/SE\$4
29			=B29-\$B\$17		2424	0.6	=F29-0.4	=G29*(D29-D28)	=128+H29	=G29/\$J\$4	=1-J29	=LOG10(K29)	
30 31			=B30-\$B\$17 =B31-\$B\$17		2408 2413	0.7	=F30-0.4 =F31-0.4	=G30*(D30-D29) =G31*(D31-D30)	=129+H30 =130+H31	=G30/\$J\$4 =G31/\$J\$4	=1-J30	=LOG10(K30) =LOG10(K31)	
32			=B32-\$B\$17		2434	0.7	=F32-0.4	=G32*(D32-D31)	=131+H32	=G32/\$J\$4	=1-J32	=LOG10(K31)	
33		0.531250000		145	2458	0.8	=F33-0.4	=G33*(D33-D32)	=132+H33	=G33/\$J\$4	=1-J33	=LOG10(K33)	
34				150	2431	0.8	=F34·0.4	=G34*(D34-D33)	=I33+H34	=G34/\$J\$4	=1-J34	=LOG10(K34)	
35 36				155 160	2410 2447	0.8	=F35-0.4 =F36-0.4	=G35*(D35-D34) =G36*(D36-D35)	=134+H35 =135+H36	=G35/\$J\$4 =G36/\$J\$4	=1~J35 =1~J36	=LOG10(K35) =LOG10(K38)	
37		0.545138888		165	2459	1	=F37-0.4	=G37*(D37-D36)	=136+H37	=G37/\$J\$4	=1-J37	=LOG10(K37)	
38		0.548611111		170	2432	0.9	=F38-0.4	=G38*(D38-D37)	=137+H38	=G38/\$J\$4	≃1-J38	=LOG10(K38)	=D38/\$E\$4
39		0.552083333		175	2416	11	=F39-0.4	=G39*(D39-D38)	=I38+H39	=G39/\$J\$4	=1-J39	=LOG10(K39)	
40		0.559027777		180 185	2398 2403	1	=F40-0.4 =F41-0.4	=G40*(D40-D39) =G41*(D41-D40)	=139+H40 · =140+H41	=G40/\$J\$4 =G41/\$J\$4	=1-J40	=LOG10(K40) =LOG10(K41)	
42			=B42-\$B\$17		2408	1.1	=F42-0.4	=G42*(D42-D41)	=141+H42	=G42/\$J\$4	=1-J42	=LOG10(K42)	
43		0.565972222			2386	1,1	=F43-0.4	=G43°(D43-D42)	=142+H43	=G43/\$J\$4	=1-J43	=LOG10(K43)	=D43/SE\$4
44			=B44-\$B\$17 =B45-\$B\$17		2388 2375	1.1	=F44-0.4 =F45-0.4	=G44*(D44-D43) =G45*(D45-D44)	=143+H44 =144+H45	=G44/\$J\$4 =G45/\$J\$4	=1~J44	=LOG10(K44) =LOG10(K45)	
46			=B46-\$B\$17		2380	1.2	=F4G-0.4	=G46*(D46-D45)	=145+H46	=G48/\$J\$4	=1-J46	=LOG10(K46)	
47		0.579861111		215	2367	1.2	=F47-0.4	=G47*(D47-D46)	=146+H47	=G47/\$J\$4	=1~J47	=LOG10(K47)	=D47/SE\$4
48			=B48-\$B\$17		2382	1.2	=F48-0.4	=G48°(D48-D47)	=147+H48	=G48/\$J\$4	=1~J48	=LOG10(K48)	
49 50			=849-\$B\$17 =850-\$B\$17		2384	1,2	=F49-0.4 =F50-0.4	=G49*(D49-D48) =G50*(D50-D49)	=148+H49 =149+H50	=G49/\$J\$4 =G50/\$J\$4	=1~J49 =1~J50	=LOG10(K49) =LOG10(K50)	
51		0.593750000		235	2363	1.2	=F51-0.4	=G51*(D51-D50)	=150+H51	=G51/\$J\$4	=1-J51	=LOG10(K51)	
52		0.597222222	=B52-\$B\$17	240	2386	1.2	=F52-0.4	=G52*(D52-D51)	=I51+H52	=G52/\$J\$4	=1-J52	=LOG10(K52)	=D52/\$E\$4
53			=B53-\$B\$17		2385	1.3	=F53-0.4	=G53*(D53-D52)	=152+H53	=G53/\$J\$4	=1-J53	=LOG10(K53)	
54 55		0.604166666 0.607638888		250 255	2372 2385	1.3	=F54-0.4 =F55-0.4	=G54*(D54-D53) =G55*(D55-D54)	=153+H54 =154+H55	=G54/\$J\$4 =G55/\$J\$4	=1~J54	=LOG10(K54) =LOG10(K55)	
56			=B56-\$B\$17		2375	1.3	=F58-0.4	=G56°(D56-D55)	=155+H56	=G56/\$J\$4	≂1-J58	=LOG10(K56)	=D56/\$E\$4
57		0.614583333	=B57-\$B\$17	265	2360	1.2	≃F57-0.4	=G57*(D57-D56)	=156+H57	=G57/\$J\$4	=1-J57	=LOG10(K57)	=D57/SE\$4
58			=B58-\$B\$17		2374	1.3	=F58-0.4	=G58*(D58-D57)	=157+H58	=G58/\$J\$4	=1-J58	=LOG10(K58)	
59 60			=859-\$8\$17 =860-\$8\$17		2367	1.4	=F59-0.4 =F60-0.4	=G59*(D59-D58) =G60*(D60-D59)	=159+H60 ·	=G59/\$J\$4 =G60/\$J\$4	=1-J59	=LOG10(K59) =LOG10(K60)	
61			=B81-\$B\$17		2370	1.4	=F81-0.4	=G61*(D61-D60)	=160+H81	=G61/\$J\$4	=1~J61	=LOG10(K61)	=D61/\$E\$4
62			=B62-\$B\$17		2389	1.4	=F82-0,4	∓G62*(D62-D61)	=161+H62	=G82/\$J\$4	=1-J62	=LOG10(K62)	
63 64			=B63-\$B\$17		2378 2345	1.4	=F63-0.4 =F64-0.4	=G63*(D63-D62)	=162+H63 =163+H64	=G83/\$J\$4 =G84/\$J\$4	=1-J83 =1-J84	=LOG10(K63) =LOG10(K64)	
65	<b> </b>		=B64-\$B\$17 =B65-\$B\$17		2384	1.4	=F65-0.4	=G84*(D64-D63) =G65*(D65-D64)	=164+H65	=G65/\$J\$4	=1-364	=LOG10(K64)	
66		0.645833333	=B66-\$B\$17	310	2398	1.4	=F66-0.4	=G66*(D66-D65)	=165+H68	=G66/\$J\$4	=1~J66	=LOG10(K66)	=D66/\$E\$4
67			=B87-\$B\$17		2389	1.4	=F67-0.4	=G87*(D67-D68)	=166+H67	=G67/\$J\$4	=1~J67	=LOG10(K67)	
68 69			=B68-\$B\$17 =B69-\$B\$17		2368 2353	1.4	=F68-0 4 =F69-0.4	=G68*(D68-D67) ≈G69*(D69-D68)	=167+H68 =168+H69	=G68/\$J\$4 =G69/\$J\$4	=1-J68 =1-J69	=LOG10(K68) =LOG10(K69)	
70			=809-38317 =870-\$B\$17		2342	1.4	=F70-0.4	=G70*(D70-D69)	=169+H70	=G70/\$J\$4	=1-J70	=LOG10(K70)	
71	Feed Off	0.680555555	=B71-\$B\$17	360	2341	1,5	=F71-0.4	=G71°(D71-D70)	=170+H71	=G71/\$J\$4	=1-J71	=LOG10(K71)	
72			=B72-\$B\$17		2374	1.4	=F72-0.4	=G72*(D72-D71)	=171+H72			1	
73 74			=B73-\$B\$17 =B74-\$B\$17		2383	1.5	=F73-0.4 =F74-0.4	=G73*(D73-D72) =G74*(D74-D73)	=172+H73 =173+H74		1	<del> </del>	<del> </del>
75			=B75-\$B\$17		2352	1.4	=F75-0 4	=G75*(D75-D74)	=174+H75	<del> </del>	<del> </del>	<del> </del>	<del> </del>
								·····					*

A-B-

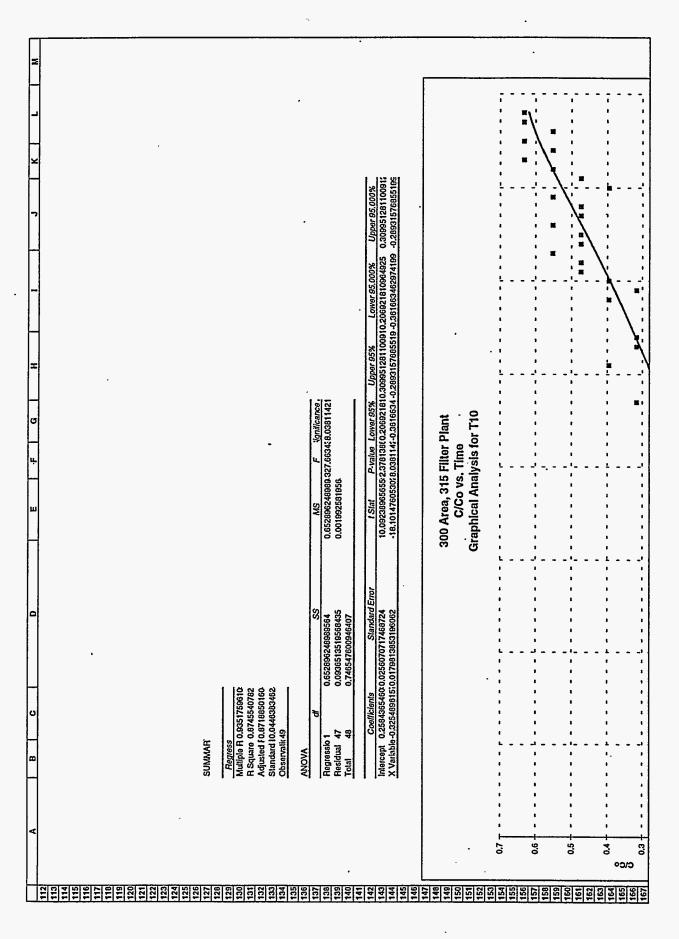
1	2000	_
2-4	1-1-7	٠.

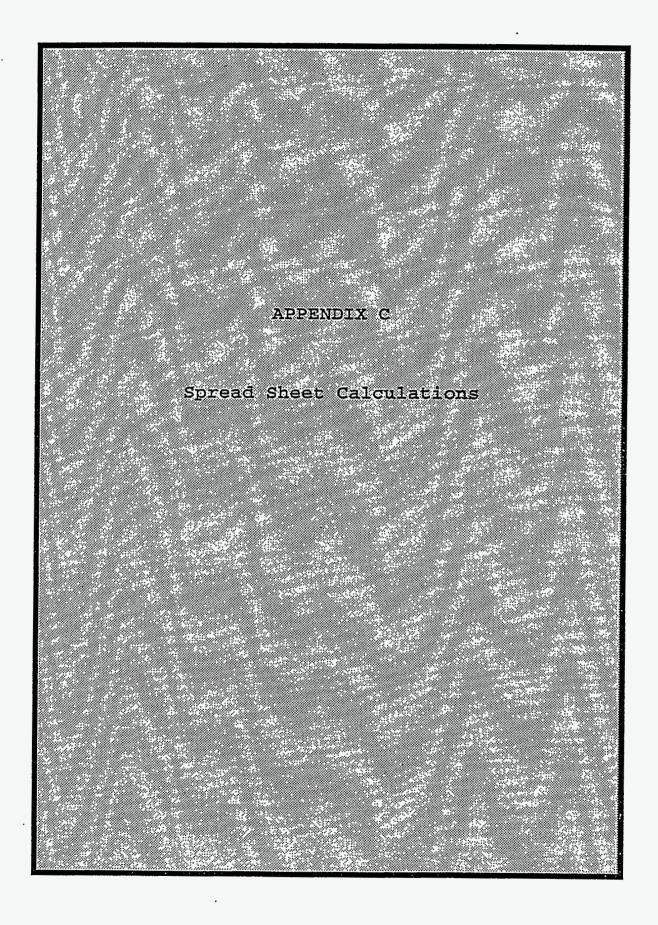
								<del> </del>	<del></del>				
	<u> </u>												1
								• • •				1 000	65
	l I		1	i		İ		İ	1	į į			100
		****************						ļ	······································		·····		100
	1 1		i					İ	į	i			96
	I [		ı					]	į	İ		۱ ۵	)   66
										··-···································	***************************************	‱ g	34
	11		1	•					1	1		ľ	1 55
	1 !		!	,		<i>*</i> • • •		l	l	ł		i	75
	1 1	<del></del>		***************************************			antentania, at a tantan min						1
	1 1			•				İ		i			30
	1 1			•		* * *		İ	i	ŀ			67
		************************							***************************************	***************************************	·····	001.0	92
			ı	~~ ~~	• • •								177
	11					1				ļ			167
				• •		.						008.0	CZ
				` ' '		'		1					1
	l I							l					165
	•												155
	1 1					or T 101	raphical Analysis	p	ļ	1			12
		4		[		<u>l</u> əu	CICOVS: TIN			I	******	1 ‱.¹	201
								000					100
						freIQ 19	Area, 315 Fill	300					103
	L					······································							-
				•						,			41
													91
			0,56530463440	. \$0872870A128A8.0.	2070244E840E883.0	). 0872870h128h8,0.	A2EE1688E168.1	TASSBALETASO.06.		1020.0 826996209.0			21
				0.247599304399871 0						300440620 0.0262	) łąsonstn	1 '	1 1
			Vpper 95.000%	Lower 95,000%	Uppor 95%	%56 æm07	oulav-9	1915 1	Standard Error	Coefficients			13
												-	121
									19130872889				11
								0.00322000781460					10
	•					1.8826519985199.1					Regression 1	<u> </u>	60
						Significance F		SW	SS	JP.		_	80
											AVONA	Í	70
												_	90
											> enoilsviesdC		92
											Onal bisbrist		10
										CIFICHICO	Adjusted R S C		
										FTAIGNIZO	1 2 Cl betauib &	1	60
										800312239.			<u>20</u>
										90091/9256	Multiple R C Square C	4	20 20 20 20 20 20 20 20 20 20 20 20 20 2
										90091/9256	Square (	4	0 0 0 0 0
										90091/9256	Multiple R C Square C	4	200
										90091/9256	Multiple R C Square C	- Ā	20 20 20 20 20 20 20 20 20 20 20 20 20 2
										90091/9256	Regressio  Adultum  Auste	- Ā	20 20 20 20 20 20 20 20 20 20 20 20 20 2
·										90091/9256	Regressio  Adultum  Auste	- Ā	20 00 66 86 20
·					•					90091/9256	Regressio  Adultum  Auste	- Ā	
					. = beseovered = :		· · · · · · · · · · · · · · · · · · ·		20	90091/9256	Regressio  Adultum  Auste	- Ā	
				=21281.2E23\1000	uoride Recovered =	님				Coolficient = =5C51	O YAAMMUS observed O Helibple C	- Ā	
					Fluoride Injected = :	3 3	*****		05 210(0:8)-2C2114\\2C2112\.2E24	Coolficient = =5C51	O YAAMMUS observed O Helibple C	- Ā	19   10   10   10   10   10   10   10
				=2124.360.17.6/1000 =184.360.17.6/1000	691*(D91-D90) : Fluoride Injected = :	= \$,0-189= 8 F	\$0	3940	510(0.0)-\$C5114)/\$C5115)*5E54	(1922) 1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   19	9 698914288 C	5 5	
				=\$1291.2E231000 =\$124.3e0.17.e\1000 =180+H31	G90*(D90-D89) G91*(D91-D90) Fluoride Injected = :	= F90.0.4 = 691.0.4 = F91.0.4	\$0 \$0	2340 2328	510(0.0)-\$C5114)/\$C5115)*5E54	1,952546006 1,952546006 1,952546006 1,952546006 1,952546006	9 6886948 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	5 5	
				=2124.360.17.6/1000 =184.360.17.6/1000	G90*(D90-D89) G91*(D91-D90) Fluoride Injected = :	= F90.0.4 = 691.0.4 = F91.0.4	8.0		510(0.0)-\$C5114)/\$C5115)*5E54	(1922) 1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   1932   19	9 6886948 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	5 5	20 20 00
				=\$1291.2E231000 =\$124.3e0.17.e\1000 =180+H31	C88*(D88-D87) C90*(D80-D89) Ellouide Injected =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fluoide Recovered =: Fl	= F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.	9.0 8.0	2328	510(0.0)-\$C5114)/\$C5115)*5E54	1,952546006 1,952546006 1,952546006 1,952546006 1,952546006	668689NB.0 688689NB.0	5 5	2 2 0 6
				=189+H90 =180+H91 =180+H90 =180+H90	689.(088.088) 699.(080.089) 690.(090.089) Fluoride Injected =: Fluoride Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Funda Recovered =: Fund	= F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.0.4 = F89.	9.0 8.0	5358 5338	510(0.0)-\$C5114)/\$C5115)*5E54	1995-19817 625 1995-19817 655 1995-19817 655 1995-19817 655 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1997-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1995-1997 1997-1997 1997-1997 1997-1997 1997-1997 1997-1997 1997-1997 1997-1997-	968981988 (968989198 (968989198 (968989198 (969989198 (969989198 (969999 (969999 (969999 (969999 (969999 (969999 (969999 (969999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (969999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (969999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (969999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (969999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (969999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999 (96999) (96999 (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (969999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (969999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (969999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (96999) (969999) (9	S	2 2 1 0 6 8
				=189+H89 =189+H80 =189+H80 =189+H80 =189+H80	nonqe gecovered == telnonqe lujected == telnonqe lujected == telnonqe lujected == telnonqe luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger luger	E-60-0.04 = 1-69-0.04 = 1-69-0.04 = 1-69-0.04 = 1-69-0.04 = 1-69-0.04	9.0 8.0	2928 2938 2938	310(0:8)-\$C\$114\\\\$C\$119\.\$E\$4	886-8817 610 1899-8817 640 1991-8817 640 1991-8817 640 1991-8817 640 1991-8817 640 1991-8817 640 1991-8817 640 1991-881 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 1991-8818 199	9 68680/10.00 1 6868680/10.00 1 686868	S	5 5 0 6 8
				=\$1891.2E23.1000 =\$124.3E0.13.20100 =188.4B0 =188.4H00 =184.4H00 =184.4H00 =184.4H00	nonqe gecoeleg = : Elnonqe lujecteg = : Elnonqe lujecteg = : Elnonqe lujecteg = : Elnonqe luger (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-D89)   : Elson (288-(D88-(D88-(D88-(D88-(D88-(D88-(D88-	E-60-0.04 = 1-69-0.04 = 1-69-0.04 = 1-69-0.04 = 1-69-0.04 = 1-69-0.04	7.0 8.0 8.0 3.0	5358 5330 5350 5358	310(0:8)-\$C\$114\\\\$C\$119\.\$E\$4	1.892584634 1.892546006 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893-28517 1.893	ECCECCEGO	5 5 0 0 0 0 0 0 0	2 2 3 0 6 8 8 4
				=\$1891.2E\$3/1000 =\$184.9E\$3/1000 =\$184.H93 =\$188.H99 =\$184.H98 =\$184.H98 =\$182.H98	nonqe yecooxeeq = nonqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecooxeeq = ponqe yecoox	E   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   10	7.0 6.0 8.0 8.0	2328 2328 2328 2328	BLOÓO B)-2C2114)\2C211B).2E24	"052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006	68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   686896518.0 	5 2 1 0 6 8 2 9	
				=\$1891.2E231000 =\$124.3E0.12'611000 =180.4160 =180.4160 =180.4160 =180.4162 =180.4162 =180.4162 =180.4162	nonqe Becovered = nonqe Best (D84-D83)   C84-(D84-D83)   C88-(D82-D83)   C88-(	E	80 80 80 80 80 80 80	5358 5338 5338 5338 5338 5338 5344 5348	BLOÓO B)-2C2114)\2C211B).2E24	"052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006 "052246006	68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   68689518.0   686896518.0 	5 2 1 0 6 8 2 9	
	· ·			=\$1801.2E\$3\1000 -\$180.200.1\2000.1 -\$180.200.1\2000.1 -\$180.4100 -\$180.4100 -\$180.4100 -\$180.4100 -\$180.4100 -\$180.4100 -\$180.4100 -\$180.4100 -\$180.4100	notide Recovated =: Fluoride Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting Injected =: Elanting I	= 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-1010'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4 = 1-100'4	90 90 20 20 20 20 80 60	5358 5328 5334 5341 5338 5342 5338 5338 5338 5338	3.10(0'8)-2C21.14)\2C21.12).2E24	1992-8817 555 1992-8817 655 1992-8817 655 1993-8817	69999 N. 18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		20 20 30 60 60 41 20 90 90 90 90 90 90 90 90 90 90 90 90 90
				\$1891.2E23/1000 \$218.200.12'04.1000 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4100 \$189.4	nonqe yecooned m ceal(Da1-De) ceal(Da1-De) ceal(Da2-De) ceal(Da3-De) ceal(Da3-De) ceal(Da3-De) ceal(Da3-De) ceal(Da3-De) ceal(Da3-De) ceal(Da3-De) ceal(Da3-De) ceal(Da3-De) ceal(Da3-De) ceal(Da3-De)	EB100'V = EB100'V = EB100'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V = EB00'V =	90 90 20 20 20 20 60 60 60	5358 5328 5336 5334 5342 5336 5331 5342 5343 5344 5344	3.10(0'8)-2C21.14\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000   1.000	88888187.0  ECCEGOOB.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  688884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884785.0  6888884		5 5 7 10 0 6 6 8 9 9 9 9
	· · ·			\$\\ \text{1801.2E2\\ 1000} \\ \text{1801.2E2\\ 1000} \\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 1800\\ 180	nonqe yecoxeteq :: Elnoiqe yecoxeteq :: Elnoiqe plecced :: Elnoiqe plecced :: Elnoiqe plecced :: Elnoiqe yecoxeteq :: Elnoiqe yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxeteq :: Elsoique yecoxe	EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100   EB100	90 90 20 20 20 20 60 60 60	5358 5328 5324 5326 5326 5342 5342 5343 5344 5344 5345 5345	310(0:8)-2C2114)\2C2112).2E24	100 200 200 200 200 200 200 200 200 200	6999191910		2 0 0 6 8 2 9 9 9 9 2 9
				001/2823/1000 164-0612 164-0612 164-0612 169-46812 169-46812 169-4682 169-4682 169-4682 169-4682 169-4682 169-4682 169-4682 169-4682	nonqe pleced m  281.(D81-D80)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)  282.(D82-D83)	E	90 90 20 20 20 20 60 60 60	2328 2328 2328 2324 2324 2324 2324 2324	3.10(0/8)-2C21.14\\2C21.12\\.2E24	"000   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100	EEEEEBOTTO  8000011000110001100011000110001100011	S S S S S S S S S S S S S S S S S S S	50 50 60 60 60 60 60 60 60 60 60 60 60 60 60
	· · · · · · · · · · · · · · · · · · ·			\$1891.2E23/1000 \$218.200.12 (0.1000 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160 \$189.160	noulde Recovered = 15 Fluoride Injected = 1601-(D81-D80)   (2691-D82-D83)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82)   (2691-D82-D82-D82-D82-D82-D82-D82-D82-D82-D82	= 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.000 d = 1.00	90 90 20 20 40 60 60 60 1 1 1 1 1	2328 2328 2334 2342 2342 2343 2343 2343	3.10(0'8)-2C2114)\2C2112).2E24	"000   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100	99991F03FC 99991F03FC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F23BC 99991F25BC 99991F25BC 99991F25BC 99991F25BC 99991F25BC 99991F25BC 99991F25BC 99991F25BC 99991F		50 50 60 60 60 60 60 60 60 60 60 60 60 60 60
				\$21,000 \$20,42,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,0	nonqe yecooned m ceal(Da1-Da0) ceal(Da1-Da0) ceal(Da2-Da0) ceal(Da3-Da0)	EB100'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB10'V = EB	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	2328 2328 2324 2324 2324 2324 2324 2325 2325 2325	3.10(0'8)-2C21.14\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	100 100 100 100 100 100 100 100 100 100	999116216 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219 999116219		Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   Prince   P
				184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184-041 184	nonqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxeeq =  ponqe yecooxe	10   10   10   10   10   10   10   10	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	5358 5336 5331 5331 5331 5332 5342 5342 5343 5343 5343 5343 5343	3.10(0-8)-2C21.14)\2C21.12).2E24	100 200 200 200 200 200 200 200 200 200	6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  68698989891007.0  68698989891007.0  6869898989898989899999999999999999999		50 50 60 60 60 60 60 60 60 60 60 60 60 60 60
				\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	noulee Jeccovated =: Elmoulee Julected =: Elmoulee Julected =: (264.1081-080) (269.1086-088) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089) (269.1086-089)	1	\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	2958 2926 2937 2938 2939 2939 2939 2939 2939 2942 2942 2942	3.10(0'8)-2C2114)\2C2112).2E24	10000000000000000000000000000000000000	6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  68698989891007.0  68698989891007.0  6869898989898989899999999999999999999		50 50 60 60 60 60 60 60 60 60 60 60 60 60 60
	(comp.) Voi fina		om.	(Vnim-pm)	molye yecowate a polye yecowate a party of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the year of the polye year of the polye year of the polye year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of	100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   1000	(Apm)  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.	2358 2326 2326 2326 2326 2326 2326 2327 2326 2327 2327	3.10(0'8)-2C2114)\2C2112).2E24	COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT =	686989716 686989718 686989718 686989718 686989718 686989718 686989718 686989718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718		5 2 3 6 8 4 9 9 9 9 9 7 1 1
TV	(o)(1-(1-(1-(1-(1-(1-(1-(1-(1-(1-(1-(1-(1-(	1-cico	cyco	## 15/14/5/1  ### 1/4/14/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  ### 1/4/5/1  #	Lead (mg-min/L)  1. Fluoride Injected =: Fluoride Flore  1. Fluoride Injected =: Fluoride Flore  1. Fluoride Injected =: Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluoride Flore  1. Fluori	EB10'0'4 = EB10'0'4 = EB00'0'4 = EB10'0'4 =	bonssoM (Apm) E, I E,	2958 2926 2937 2938 2939 2939 2939 2939 2939 2942 2942 2942	3.10(0'8)-2C2114)\2C2112).2E24	10000000000000000000000000000000000000	6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6868981007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  6869891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  686989891007.0  68698989891007.0  68698989891007.0  6869898989898989899999999999999999999		\$ 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	(o3)2-1)01goJ	1-000	cyco	(Vnim-pm)	molye yecowate a polye yecowate a party of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the polye year of the year of the polye year of the polye year of the polye year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of the year of	100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   100004=   1000	(Apm)  8.0  8.0  8.0  8.0  8.0  8.0  8.0  8.	2358 2326 2326 2326 2326 2326 2326 2327 2326 2327 2327	3.10(0'8)-2C2114)\2C2112).2E24	COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT = =2C21 COOLICIENT =	686989716 686989718 686989718 686989718 686989718 686989718 686989718 686989718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718		\$ 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
ın	[o2/2-1]o:Bo]			## Solution	nonide Recovered ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## pickimental ## p	Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet	bonssoM (Apm) E, I E,	2328 2328 2329 2329 2329 2329 2329 2329	2.10(0'8)-2C21.14\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	(coolficient = \$C\$10 (coolficient = \$C\$10	686989716 686989718 686989718 686989718 686989718 686989718 686989718 686989718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718 68698718		Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page
ın	(o)/()-()0800		2124•17.6/\$E\$3	======================================	nonde Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Recovered = 1 incide Rec	Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet	bonssoM (Apm) E, I E,	2328 2328 2328 2329 2329 2329 2329 2329	Time (1)=  Time t  Time t  Time t	1   1   1   1   1   1   1   1   1   1	emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil  emil		MM   CC   CC   CC   CC   CC   CC   CC
IV	(O)/O-1)01B07		5154•17.6/\$E\$3	0 - mule loss due to alum - 0 20,78 = 20,78 = 10,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000	ide Dosage (Co) = 6  i Fluoride Injected = 5  C691(D91-D90)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(D81-D80)   6  C681(	Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet	bonssoM (Apm) E, I E,	2328 2328 2329 2329 2329 2329 2329 2329	Time (1)=  Time t  Time t  Time t	(coolficient = \$C\$10 (coolficient = \$C\$10	emiT  EEEEBSET, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST,		PM   PM   PM   PM   PM   PM   PM   PM
TV	(OD/D-1)01B07		5154•17.6/\$E\$3	= 82,076 Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Area Ar	ide Dosage (Co) = 6  i Fluoride Injected = 5  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(	Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet	bonssoM (Apm) E, I E,	2328 2328 2328 2329 2329 2329 2329 2329	Time (1)=  Time (1)=  Time (2)=  Time (3)=  Time (4)=  Time (4)=  Time (4)=	1   1   1   1   1   1   1   1   1   1	emiT  EEEEBSET, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST,	S S S S S S S S S S S S S S S S S S S	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the
ıv	[O2):0-[Jo:Bo]		5154•17.6/\$E\$3	0 - mule loss due to alum - 0 20,78 = 20,78 = 10,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000   0,000	ide Dosage (Co) = 6  i Fluoride Injected = 5  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(D85-D85)  cas'(	Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet   Titcet	bonssoM (Apm) E, I E,	2328 2328 2328 2329 2329 2329 2329 2329	Time (1)=  Time t  Time t  Time t	1   1   1   1   1   1   1   1   1   1	emiT  EEEEBSET, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST, C  BASSIFOST,		Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page   Page

								····	γ				
├—	A	<u>B</u>	<u> </u>	D	E	F	G	н		J	К	L	M
1	ICF KAISER HANF										216		
2	Date:	34781		AUCD LOCKER CO.					centration (Baseline):				
3	<del></del>		age test flow =	=AVERAGE(E18:E104) Theoretical Resedence Time (T)=	=D3*3.785306	<u> </u>			Ide loss due to alum -		<u>⇔J3/J4</u>		
5		··		i neoretical Hesedence (Ime (I)=	=1605000/\$E\$3	<del></del>		de Dosage (Co) =	580	=\$I\$4*17.6/\$E\$3			
6		F			l	Fluoride	Tracer	Incrimental	Cumulative	1	T		
7		Time	Time t	Time t	Flowrate		oncentratio	Area	Area	C/Co	1-0/00	Log10(1-C/Co)	VΤ
В		'''''	(h:mm)	(min)	(gpm)	(mg/L)	(mg/L)	(mg-min/L)	(mg-min/L)	0,00	,	Logisti Groot	
9	Background	0.3645833	3		495		0	N/A	N/A		1		
10		0.3680555			493	0.4	0	. N/A	N/A				
11		0,3715277	ł		438	0.4	0	N/A	N/A				
12		0.375			775		0	N/A	N/A				
13		0.3784722			1318	0.4	0	N/A	N/A		<b></b>		
14		0.3819444	1		1567	0.3	0	N/A	N/A	ļ	ļ		
15						· .					<u> </u>		
16 17	Start Injection	0.4007007	=B17-\$B\$17	0				<del></del>	0	<b> </b>			
18	Start injection		=B18-\$B\$17	110	2161	0.3	≈F18-0.4		□ □117+H18	=G18/\$J\$4	≈1-J18	=LOG10(K18)	-Dieger
19				20	2106	0.4		=G19*(D19-D18)	=117+1118 =118+H19	=G19/\$J\$4	=1-J18	=LOG10(K18)	=D18/SE\$4
20			=B20-\$B\$17	ACCOUNT OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PAR	2108	0.4	=F20-0.4	=G20*(D20-D19)	=119+H20	=G20/\$J\$4	=1-J20	=LOG10(K20)	=D19/3E34
21		0.4375	=B21-\$B\$17		2092	0.4	=F21-0.4	=G21*(D21-D20)	=120+H21	=G21/\$J\$4	=1-J21	=LOG10(K21)	=D21/\$E\$4
22		0.444444	=B22-\$B\$17	50	2105	0.4	=F22-0.4	=G22*(D22-D21)	=121+H22	=G22/\$J\$4	=1-J22	=LOG10(K22)	=D22/\$E\$4
23		0.4513888	=B23-\$B\$17	60	2159	0.4	=F23-0.4	=G23*(D23-D22)	=122+H23	=G23/\$J\$4	=1-J23	=LOG10(K23)	=D23/\$E\$4
24		0.4583333			2118	0.4	□F24-0.4	≈G24*(D24-D23)	=123+1424	=G24/\$J\$4	=1-J24	=LOG10(K24)	=D24/\$E\$4
25				80	2124	0.4	=F25-0.4	=G25*(D25-D24)	=l24+H25	≈G25/\$J\$4	≖1-J25	=LOG10(K25)	=D25/\$E\$4
26		0.4722222		90	2133	0.4	=F26-0.4	≈G26*(D26-D25)	=125+H26	=G26/\$J\$4	=1-J26	=LOG10(K26)	≈D26/\$E\$4
27			=B27-\$B\$17		2123	0.4	=F27-0.4	=G27*(D27-D26)	≈126+H27	=G27/\$J\$4	=1-J27	=LOG10(K27)	≈D27/\$E\$4
28			=B28-\$B\$17		2098	0.4	=F28-0.4	=G28*(D28-D27)	≖127+H28	=G28/\$J\$4	≠1-J28	=LOG10(K28)	=D28/\$E\$4
29			=B29-\$B\$17		2172	0.5	=F29-0.4	=G29*(D29-D28)	=128+H29	≈G29/\$J\$4	=1-J29	=LOG10(K29)	=D29/\$E\$4
30	· · · · · · · · · · · · · · · · · · ·	0.5	=B30-\$B\$17	130	2150	0.5	=F30-0.4	=G30*(D30-D29)	=129+1-130	≈G30/\$J\$4	=1-J30	=LOG10(K30)	=D30/\$E\$4
31				135	2128 2128	0.5	=F31-0.4 =F32-0.4	=G31*(D31-D30) =G32*(D32-D31)	=130+H31	=G31/\$J\$4	=1-J31	=LOG10(K31)	=D31/\$E\$4
33			=B33-\$B\$17		2118	0.4	≈F33-0.4	=G32*(D32-D31)	≈131+H32 =132+H33	=G32/\$J\$4 =G33/\$J\$4	=1-J32	=LOG10(K32)	=D32/\$E\$4 =D33/\$E\$4
34				150	2160	0.4	=F34-0.4	=G34*(D34-D33)	#I334H34	=G34/\$J\$4	=1-J34	=LOG10(K34)	=D33/3E\$4
35			=B35-\$B\$17		2130	0.5	=F35-0.4	=G35*(D35-D34)		=G35/\$J\$4	=1-J35	=LOG10(K35)	=D35/\$E\$4
36		0.520833			2135	0.5	≈F36-0.4	=G36*(D36-D35)	=135+H36	≠G36/\$J\$4	=1-J36	=LOG10(K36)	=D36/\$E\$4
37		0.524305			2146	0.5	=F37-0.4	=G37*(D37-D36)	=136+H37	=G37/\$J\$4	=1-J37	≈LOG10(K37)	=D37/\$E\$4
38		0.527777	=B38-\$B\$17	170	2148	0.5	=F38-0.4	=G38*(D38-D37)	=I37+H38	=G38/\$J\$4	=1-J38	=LOG10(K38)	=D38/\$E\$4
39		0.53125	=B39-\$B\$17		2176	0,5	=F39-0.4	=G39*(D39-D38)	≈I38+H39	=G39/\$J\$4	=1-J39	=LOG10(K39)	
40		0.534722		180	2184	0.5	≈F40-0.4		≈139+H40	=G40/\$J\$4	=1-J40	=LOG10(K40)	=D40/\$E\$4
41				185	2142	0.5	=F41-0.4		=140+H41	=G41/\$J\$4	=1-J41	=LOG10(K41)	
42			=B42-\$B\$17		2138	0.6	≈F42-0.4	=G42*(D42-D41)	≈141+H42	=G42/\$J\$4	≈1-J42	=LOG10(K42)	=D42/\$E\$4
43			=B43-\$B\$17	W-0.77.	2165	0.5	=F43-0.4	=G43*(D43-D42)		=G43/\$J\$4	=1-J43	=LOG10(K43)_	
44		0.552083	=B44-\$B\$17 =B45-\$B\$17	200	2170 2239	0.6	=F44-0.4 =F45-0.4	=G44*(D44-D43)		=G44/\$J\$4	=1-J44	=LOG10(K44)	
46		0.555555		210	2182	0.6	=F45-0.4	=G45°(D45-D44) =G46°(D46-D45)		=G45/\$J\$4 =G46/\$J\$4	=1-J45 =1-J46	=LOG10(K45)	
47		0.559027	7=B47-\$B\$17		2063	0.7	=F40-0.4	=G40*(D45-D45)		=G47/\$J\$4	=1-J46 =1-J47	=LOG10(K46) =LOG10(K47)	=D46/3E34 =D47/\$E\$4
48		0.5625	=B48-\$B\$17		2071	0.7	=F48-0.4	=G48*(D48-D47)		=G48/\$J\$4	=1-J47	=LOG10(K47)	=D48/\$E\$4
49		0.565972		225	2071	0.7	≟F49-0.4	=G49*(D49·D48)	=148+1-149	=G49/\$J\$4	=1-J49	=LOG10(K49)	=D49/SE\$4
50		0.569444			2110	0.7	=F50-0.4	=G50*(D50-D49)	=149+H50	=G50/\$J\$4	=1-J49		
51				235	2200	0.7	□F51-0.4	=G51*(D51-D50)	≈150+H51	=G51/\$J\$4	=1-J51	=LOG10(K51)	=D51/\$E\$4
52				240	2150	0.8	=F52-0.4	=G52*(D52-D51)	=151+H52	=G52/\$J\$4	#1-J52	=LOG10(K52)	=D52/\$E\$4
53			=B53-\$B\$17		2059	0.7	=F53-0.4	=G53*(D53-D52)	≖152+H53	=G53/\$J\$4	=1-J53	=LOG10(K53)	=D53/\$E\$4
54			=B54-\$B\$17		2072	0.7	≖F54-0.4	=G54*(D54-D53)	=153+H54	=G54/\$J\$4	≖1-J54	=LOG10(K54)	
55		0.586805	=B55-\$B\$17	255	2136	0.7	=F55-0.4	=G55°(D55-D54)	=154+H55	=G55/\$J\$4	⇒1-J55	=LOG10(K55)	≃D55/\$E\$4
		13,555,555	4-555-555-7	_	18.77	10.0	1-1 00 0.1	1-000 (000 004)	1-10-411100	1=000/0004	1-000	1-LOG TO(KOO)	12000

WHC-SD-ER5480-ER-001
, Rev.

	A	В	С	D	E	F	G	Н	1	J	к		M
56			=B56-\$B\$17		2117		=F56-0.4	=G56*(D56-D55)	-155±H58		=1-J56	=LOG10(K56)	=D56/\$E\$4
57		.59375	=B57-\$B\$17				=F57-0.4				=1-J57	=LOG10(K57)	
58		.597222		270			=F58-0.4				=1-J58	=LOG10(K58)	=D58/\$E\$4
59			=B59-\$B\$17				=F59-0.4				≈1-J59	=LOG10(K59)	=D59/\$E\$4
60		.6041660		280			=F60-0.4				=1-J60	=LOG10(K60)	=D60/\$E\$4
61							=F61-0.4	<del></del>			=1-J61	=LOG10(K61)	=D61/SE\$4
62				290			=F62-0.4				=1-J62	=LOG10(K62)	=D62/SE\$4
63							=F63-0.4				=1-J63	=LOG10(K63)	=D63/\$E\$4
64					2109		=F64-0.4				=1-J64	=LOG10(K64)	=D64/\$E\$4
65					2111		=F65-0.4	=G65*(D65-D64)			=1-J65	=LOG10(K65)	=D65/\$E\$4
66		.625	=B66-\$B\$17		2100		=F66-0.4	=G66*(D66-D65)			=1-J66	=LOG10(K66)	=D66/\$E\$4
67			=B67-\$B\$17		2112		=F67-0.4	=G67*(D67-D66)			=1-J67	=LOG10(K67)	=D67/\$E\$4
68			=B68-\$B\$17				=F68-0.4				=1-J68	=LOG10(K68)	=D68/\$E\$4
69					2163		=F69-0.4	=G69*(D69-D68)			=1-J69	=LOG10(K69)	=D69/\$E\$4
70			=B70-\$B\$17		2136		=F70·0.4				=1-J70	=LOG10(K70)	=D70/\$E\$4
71			=B71-\$B\$17		2093		≖F71-0.4	=G71°(D71-D70)		=G71/\$J\$4	=1-J71	=LOG10(K71)	=D71/SE\$4
72			=B72-\$B\$17		2136		⇒F72-0.4	=G72*(D72-D71)			=1-J72	=LOG10(K72)	=D72/\$E\$4
73			=B73-\$B\$17		2132		=F73·0.4	=G73*(D73-D72)			=1-J73	=LOG10(K73)	=D73/\$E\$4
74			=B74-\$B\$17		2111		=F74-0.4	=G74*(D74-D73)			=1-J74	=LOG10(K74)	
75			=B75-\$B\$17		2114	0.9	=F75-0.4	=G75*(D75-D74)		=G75/\$J\$4	=1-J75	=LOG10(K75)	=D75/\$E\$4
76	la	.6597222	-B76-\$B\$17	360	2106	1	≖F76-0.4	=G76*(D76-D75)		≖G76/\$J\$4	=1-J76	=LOG10(K76)	
77	lo	.6631944	=B77-\$B\$17		2128	1.1	≖F77-0.4	=G77*(D77-D76)		=G77/\$J\$4	=1-J77	=LOG10(K77)	=D77/SE\$4
78	la	.6666666	≈B78-\$B\$17	370	2114	1.2	=F78-0.4	=G78*(D78-D77)	=177+H78	≈G78/\$J\$4	=1-J78	=LOG10(K78)	=D78/\$E\$4
79	lo	.6701386	-B79-\$B\$17	375	2087	1.1	≈F79-0.4	≈G79*(D79-D78)	=I78+H79	=G79/\$J\$4	=1-J79	=LOG10(K79)	=D79/\$E\$4
80	lo	.6736111	=B80-\$B\$17	380	2111	1.2	=F80-0.4	=G80*(D80-D79)	=179+H80	=G80/\$J\$4	=1-J80	=LOG10(K80)	=D80/\$E\$4
81	la	.6770833	=B81-\$B\$17	385	2112	1.1	=F81-0.4	=G81*(D81-D80)		≈G81/\$J\$4	=1-J81	=LOG10(K81)	
82	i d	.680555	=B82-\$B\$17	390	2107	1.2	=F82-0.4	=G82*(D82-D81)	≈181+H62	=G82/\$J\$4	=1-J82	=LOG10(K82)	=D82/\$E\$4
63 F	eed Off 0	.684027	=B83-\$B\$17	395	2143	1.2	≖F83-0.4	≈G83*(D83-D82)	#1824H63	=G83/\$J\$4	=1-J83	=LOG10(K83)	=D83/\$E\$4
84	10	.6874999	=B84-\$B\$17	400	2115	1	=F84·0.4	=G84*(D84-D83)	=183+H84	=G84/\$J\$4	=1-J84	=LOG10(K84)	=D84/\$E\$4
85		.6979160	=B85-\$B\$17	415	2131	1	=F85-0.4	=G85*(D85-D84)	≈184+H85				
86	lo	.7083333	=B86-\$B\$17	430	2153	1	=F86-0.4	=G86*(D86-D85)	=185+H86				
87	lo lo	7187500	=B87-\$B\$17	445	2108	1	=F87-0.4	=G87*(D87-D86)	=186+H87				
88		.7291666	=B88-\$B\$17	460	2112	1	≈F88-0.4	=G88*(D88-D87)	≈187+H88				
89	C	.7395833	=B89-\$B\$17	475	2108	1	=F89-0.4	=G89*(D89-D88)	=1884H89				
90			≈B90-\$B\$17		2088	1	=F90-0.4	=G90*(D90-D89)					
91				505	2127	1	=F91-0.4	=G91*(D91-D90)					
92				520	2131		=F92-0.4	=G92*(D92·D91)					
93				535	2134	1	≈F93-0.4	≈G93*(D93-D92)					
94				550	2140	0.8	≈F94-0.4	=G94*(D94-D93)					
95				565	2140	8.0	≈F95-0.4	≂G95*(D95·D94)				<u> </u>	
96				580	2129	0.9	=F96-0.4	=G96*(D96-D95)					
97			=B97-\$B\$17	595	2134	0.8	=F97-0.4	=G97*(D97-D96)					
98			=B98-\$B\$17	610	2142		=F98-0.4	≖G98*(D98-D97)					
99			=B99-\$B\$17	625	2126	0.8	≈F99-0.4	=G99*(D99-D98)				1	
100			=B100-\$B\$17		2131			=G100*(D100-D9				1	
101			=B101-\$B\$17		2126			=G101*(D101-D10				1	ļ
102		.875	=B102-\$B\$17		2120			=G102*(D102-D10				1	
103			B103-\$B\$17		2126			=G103*(D103-D10				L	
104	lg		=B104-\$B\$17		2119	0.4	=F104-0.4	=G104*(D104-D10					
105			3 Time (T10) =	=((LOG10(0.9)-\$C\$143)/\$C\$144)*\$E\$4					=\$ \$4°395°17.6/1000				
106					·				=\$I\$104°\$E\$3/1000				
107			n Coefficient ⇒	=\$C\$131				oride Recovered =	=\$I\$106/\$I\$105				
108				,									
109													
110								x					
111													





ICF KAISI	ER HAN	VFORD	COMPA	.NY		315 F	ilter Plant, 3	00 Area		2400	GPM Tracer	Test
Date:	3/6/95				Ba		ide Concentrat	ion (Baseline)=	0.40 mg/L	•		
				(9009 L/min)			Fluoride loss	due to alum ~	0.10 mg/L	(8%)		
		cal Resedenc			Ар	plied Fluoride [		620.8 ml/min				
	1				Fluoride	Тгасег	Incrimental	Cumulative				
ł	Time	Time t	Time t	Flowrate	Measured	concentration	Area	Area	C/Co	1-C/Co	Log <sub>10</sub> (1-C/Co)	ŧ∕T
		(h:mm)	(min)	(gpm)	(mg/L)	(mg/L)	(mg-min/L)	(mg-min/L)				l
Background	9:30			720	0,3			N/A	•			
	9:35			1163	0.4			N/A				
	9:40			1451	0.3			N/A				
	9:45			1733	0.4		N/A	N/A				Í
	9:50			2026	0.3		N/A	N/A				
	9:55			2240	0.4	0	N/A	N/A		<u> </u>	<u> </u>	
	10:10		·	2404								
Start injection	10:20	0:00	0	2,704				0			ļ	
5.0	10:30	0:10	10	2359	0.5	0.1	0		0.082	0.918	-0.037	0.0
	10:40	0:20	20	2354	0.5		1		0.082	0.918		0.1
	10:50	0:30	30	2344	0.4	0			0,000	1.000		0.1
	11:00	0:40	40	2398	0.4	Ō			0,000			0.2
	11:10	0:50	50	2408	0.4	0			0.000			0.2
	11:20	1:00	60	2411	0.4	0			0.000			0.3
	11:30	1:10	70	2440	0.4	0			0.000			0.3
	11:40	1:20	80	2441	0.5		1		0.082	0.918		0.4
	11:50	1:30	90	2411	0.5	0.1	1	3	0.082	0.918		0.5
	12:00	1:40	100	2433	0,5		1	4	0.082	0.918	-0.037	0.5
	12:10	1:50	110	2424	0.6		2	6	0.165	.0.835	-0.078	0.6
	12:20	2:00	120	2424	0,6		2		0.165	0.835	-0.078	0.6
	12:30	2:10	130	2408	0.7	0.3	3		0.247	0.753		0.7
	12:35	2:15	^ 135	2413	0.7	0.3	1.5	12.5	0.247	0.753		0.7
	12:40	2:20	140	2434	0.7	0,3	1.5		0.247	0.753		0.7
	12:45	2:25	145	2456	0.8		2		0,330			0.8
	12:50	2:30	150	2431	0.8	0.4	2		0.330			0.8
	12:55	2:35	155	2410	. 0.8		2		0.330			0,8
	13:00	2:40	160	2447	0.9		2,5	22.5	0.412	0.588		0.9
	13:05	2:45	165	2459	1	0.6	3		0.495			0.9
	13:10	2:50	170	2432	0,9		2.5		0.412			0.9
	13:15	2:55	175	2416	1	0.6	3	31	0.495			0.9
	13:20	. 3:00	180	2398	1	0.6	3		0.495			1.0
	13:25	3:05	185	2403	1	0.6	3	37	0.495			1.0
	13:30	3:10	190	2408	1.1	0.7	3.5	40.5	0,577	0.423		1.0
	13:35	3:15	195	2386	1.1	0.7	3.5	44	0.577	0.423		1.0
	13:40	3:20	200	2388	1.1	0.7	3.5	47.5	0.577	0.423		1.1
	13:45	3:25	205	2375	1.1	0.7	3.5	51	0.577	0.423	-0.374	1.1

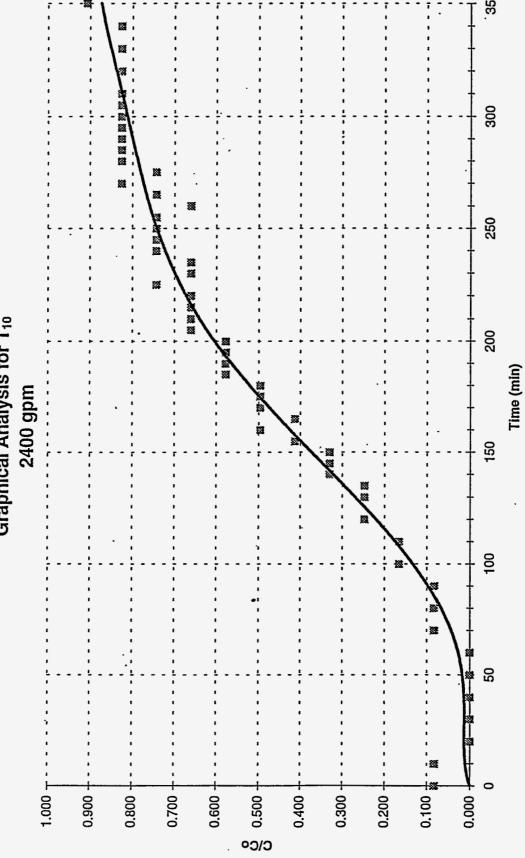
## 2400gpm

ICF K	CAISE	R HAN	NFORD	COMPA	NY			ilter Plant, 30		•	2400	GPM Tracer T	est		
	Date:	3/6/95				Ba	ckground Fluori		on (Baseline)=						
					(9009 L/min)				due to alum ~		(8%)				
		Theoretic	cal Resedenc	e Time (T)=	178 min	Ap	plied Fluoride C	osage (Co) =	620.8 ml/min	(1.21 mg/L)					
						Fluoride	Tracer	Incrimental	Cumulative			1			
		Time	Time t	Time t	Flowrate	Measured	concentration	Area	Area	C/Co	1-C/Co	Log <sub>10</sub> (1-C/Co)	υ		
	ļ		(h:mm)	(min)	(gpm)	(mg/L)	(mg/L)	(mg-min/L)	(mg-min/L)						
		13:50	3:30	210	2380	1.2		4	55	0,660	0.340	-0.468	1.18		
		13:55	3:35	215	2367	1.2	0.8	· 4	59	0.660	0.340	-0.468	1.21		
		14:00	3:40	220	2382	1.2	· 0.8	4	63	0.660	0.340		1:23		
		14:05	3:45	225	2384	1.2	0.8	4	67	0.660	0.340	-0.468	1.26		
		14:10	3:50	230	2383	1.3	0.9	4.5	71.5	0.742	0.258	-0,589	1.29		
		14:15	3:55	235	2363	1.2	8.0	4	75.5	0.660	0,340	-0.468	1.32		
		14:20	4:00	. 240	2386	1.2		4	79.5	0.660	0.340		1.35		
		14:25	4:05	245	2385	1.3	0.9	4.5	84	0,742	0.258	-0.589	1.38		
		14:30	4:10	250	2372	1.3		. 4.5	88.5	0.742	0.258		1.40		
		14:35	4:15	255	2385	1.3	0.9	4.5	93	0.742	0.258		1.43		
		14:40	4:20	260	2375	1.3	0.9	4.5	97.5	0.742	0.258	-0.589	1.46		
		14:45	4:25	265	2360	1.2	0.8	4	101.5	0.660	0,340	-0.468	1.49		
		14:50	4:30	270	2374	1.3	0.9	4.5	106	0.742	0.258	-0.589	1.52		
		14:55	4:35	275	2367	1.4	1	5	111	0.825	0,175		1.54		
		15:00	4:40	280	2356	1.3	0.9	4.5	115.5	0.742	0.258	-0.589	1.57		
		15:05	4:45	285	2370	1.4	1	5	120.5	0.825	0.175		1.60		
		15:10	4:50	290	2389	1.4	1	5		0.825	0.175		1.63		
		15:15	4:55	295	2378	. 1.4	1	5		0.825	0.175		1.66		
		15:20	5:00	300	2345	1.4	1	5		0.825	0.175		1.68		
		15:25	5:05	305	2384	1.4	1	5		0.825	0.175		1.71		
		15:30	5:10	310	2398	1.4	1	5		0.825	0.175		1.74		
		15:40	5:20	320	2389	1.4	1	10		0.825	0:175		1.80		
		15:50	5:30	330	2368	1.4	1	. 10		0.825	0.175		1.85		
		16:00	5:40	340	2353	1.4	1	10		0.825	0.175		1.91		
		16:10	5:50	350	2342	1.4	1	10		0.825	0.175		1.96		
Feed Off		16:20	6:00	360	2341	1.5		11	196.5	0.907	0.093	-1.032	2.02		
		16:30	6:10	370	2374	1.4		10							
		16:45	6:25	385	2383	1.5		16.5	223						
		17:00	6:40	400	2373	1.4	1	15				,			
		17:15	6:55	415	2352	1.4	1	15							
		17:30	7:10	. 430	2366	· 1.4	1	15			•				
		17:45	7:25	445	2346	1.3			281.5						
		18:00	7:40	460	2351	1,3		13.5							
		18:15	7:55	475	2332	1.2		12	307						
		18:30	8:10	490	2343	1.1	0.7	10.5							
		18:45	8:25	505	2342	1	0.6	9							
		19:00	8:40	520	2341	0.9	0.5	7.5	334						

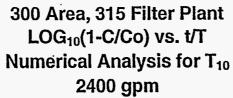
IC	F KAISI	ER HAI	NFORD	COMPA	NY		315 Fi	Iter Plant, 30	00 Area		2400	GPM Tracer 1	est
	Date:	3/6/95				Background Fluoride Concentration (Baseline)= 0.40 mg/L							
					(9009 L/min)			Fluoride loss	due to alum ~	0.10 mg/L	(8%)		
		Theoreti	cal Resedenc	e Time (T)=	178 min	Ap	plied Fluoride D	osage (Co) =	620.8 ml/min	(1.21 mg/L)			
						Fluoride	Tracer	Incrimental	Cumulative				
1	- 1	Time	Time t	Time t	Flowrate	Measured	concentration	Area	Area	C/Co	1-C/Co	Log <sub>10</sub> (1-C/Co)	ŧ/T
1	i		(h:mm)	(min)	(gpm)	(mg/L)	(mg/L)	(mg-min/L)	(mg-min/L)		İ		
		19:15	8:55	535	2337	0.9	0.5	7.5	341.5				
		19:30	9:10	550	2345	0.8	0.4	6	347.5				
		19:45	9:25	565	2339	0.7	0.3	4.5	352				
		20:00	9:40	580	2341	0.7	0.3	4.5	356.5				
		20:15	9:55	595	2329	0.7	0.3	4.5	361				
		20:30	10:10	610	2337	0.6	0.2	3	364				
		20:45	10:25	625	2336	0.6	0.2	3	367				
		21:00	10:40	640	2328	0.5	0.1	1.5	368.5				
L		21:15	10:55	655	2340	0.5	0.1	1.5	370				
	Calculated F	Resedence	Time $(T_{10}) =$	102 min			Mass Fluo	ride injected =	3933 g				•
							Mace Eluorida	Dogword -	3333 ~				

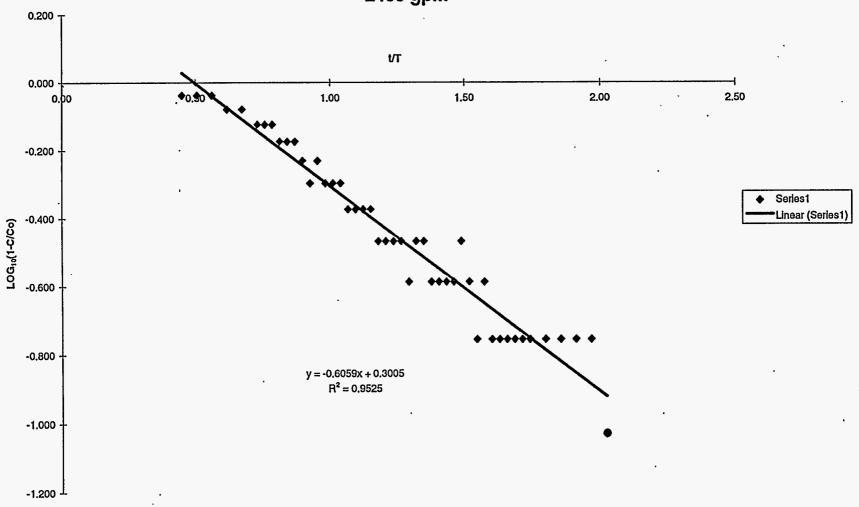
Mass Fluoride Recovered = 3333 g % Fluoride Recovered = 85%

300 Area, 315 Filter Plant C/Co vs. Time Graphical Analysis for T<sub>10</sub>



Prepared by ICF Kaiser





#### SUMMARY OUTPUT

Regressio	n Statistics
Multiple R	0.9759846
R Square	0.952546
Adjusted	0.9514915
Standard	0.0567451
Observati	47

#### ANOVA

	df	SS	MS	F	ignificance F
Regressio	1	2.908591	2.90859095	903.2869	1.9914E-31
Residual	45	0.1449004	0.00322001		
Total	46	3.0534913			

	Coefficients	tandard Err	t Stat	P-value	Lower 95%	Upper 95% ·	ower 95.000	pper 95.000%
Intercept	0.3004406	0.0262357	11.4516157	6.3E-15	0.2475993	0.353281936	0.247599304	0.35328194
X Variable	-0.6059094	0.0201602	-30.054732	1.99E-31	0,64651408	-0.56530463	-0.64651408	-0.5653046

<b>ICF KAIS</b>	ER HAI	NFORD	COMF	PANY						GPM Tracer	Test	
Date:	3/23/95				Ba	ckground Fluori		ion (Baseline)=	0.40 mg/L			
		test flow =			•			s due to alum ~		(16%)		
	Theoretical	Resedence	Time (T)=	199 min	App	olied Fluoride Do	osage (Co) =	580.0 ml/min	(1.27 mg/L)			. <u>.                                   </u>
												,
					Fluoride	Tracer	Incrimental	Cumulative				
	Time	Time t	Time t	Flowrate	Measured	concentration	Area	Area	C/Co	1-C/Co	Log10(1-C/Co)	٧T
		(h:mm)	(min)	(gpm)	(mg/L)	(mg/L)	(mg-min/L)	(mg-min/L)				
Background	8:45			495	0.3	0	N/A	N/A				
	8:50			493	0.4	0		N/A				
	8:55			438	0.4	0		N/A				
	9:00	•		775	0.4	0		N/A				<u> </u>
	9:05			1318	0.4	0		N/A				
,	9:10	i	l	1567	0.3	0	N/A	N/A				
Start injection	9:50	0;00	0					0				
	10:00	0:10	10	2161	0.3	-0.1	0			1.079		0.05
	10:10	0:20	20	2106	0.4	0	0	0	0.000			
	10:20	0:30	30	2108	0.4	0			0.000	1.000		
	10:30	0:40	40	2092	0.4	0			0.000	1.000		
	10:40	0:50	50	2105	0.4	0			0.000	1.000		
	10:50	1:00	60	2159	0.4	0	0	0	0.000	1.000		
	11:00	1:10	70	2118	0.4	0						
	11:10	1:20	80	2124	0.4	0		0				
	11:20	1:30	90	2133	0.4	0		0				
	11:30	1:40	100	2123	0.4	0						
	11:40	1:50	110	2098	0.4	0		0				
	11:50		120	2172	0.5	0.1	1	1	0.079		-0,036	
	12:00	2:10	130	2150	0.5	0.1	1	2	0.079		-0.036	
	12:05	2:15	135	2128	0.5	0.1	0,5	2.5	0.079		-0.036	
	12:10		140	2128	0.5	0.1	0.5				-0,036	
	12:15	2:25	145	2118	0.4	0	1					
	12:20		150	2160	0.4	0	<u> </u>	3	0.000			
	12:25	2:35	155	2130	0.5	0.1	0.5	3.5	0.079		-0.036	
	12:30		160	2135	0.5		0.5	4	0.079			
	12:35	2:45	.165	2146		0.1	0.5	4.5	0.079		-0.036	
	12:40	2:50	170	2148	0.5	0.1	0.5	5	0.079	0.921	-0.036	
	12:45	2:55	175	2176	0.5	0.1	0,5	5.5	0.079	0.921	-0.036	0.88
	12:50	3:00	180	2184	0.5	. 0.1	0.5	6	0.079	0.921	-0,036	
	12:55	3:05	185	2142	0.5	0.1	0.5	6.5	0.079	0.921	-0.036	
	13:00	3:10	190	2138	0.6	0.2	1	7.5	0,158	0.842	-0.075	0.95

	AISER HAI	VFORD	COMF	PANY	315 Filter Plant, 300 Area					2160 GPM Tracer Test		
D	Date: 3/23/95				Background Fluoride Concentration (Baseline) = 0.40 mg/L							
		test flow =		(8050 L/min)				s due to alum ~	0.20 mg/L	(16%)		
	Theoretical	Resedence	Time (T)=	199 min	Apı	Applied Flûoride Dosage (Co) = 580.0 ml/min (1.27 mg/L)						
1	1 . 1		•		Fluoride	Tracer	Incrimental	Cumulative	•			
1	Time	Time t	Time t	Flowrate	Measured	concentration	Area	Area	C/Co	1-C/Co	Log10(1-C/Co)	t/T
		(h:mm)	(min)	(gpm)	(mg/L)	(mg/L)	(mg-min/L)	(mg-min/L)				
	13:05	3:15	195	2165	0.5	0.1	0.5	8	0.079		-0.036	0.98
•	13:10	3:20	200	2170	0.6	0.2	1	9	0.158		-0.075	1.00
	13:15	3:25	205	2239	0.6	0.2	1	10	0.158		-0.075	1.03
	13:20	3:30	210	2182	0.7	0.3	1.5	11.5	0.237	0.763	-0.117	1.05
	13:25	3:35	215	2063	0.7	0.3	1.5	13	0.237	0.763	-0.117	1.08
	13:30	3:40	. 220	2071	0.7	0.3	1.5	14.5	0.237	0.763	-0.117	1.10
	13:35	3:45	225	2071	0.7	0.3	1.5	16	0.237			1.13
	13:40	3:50	230	2110	0.7	0.3	1.5	17.5	0.237	0.763	-0.117	1.15
	13:45	3:55	235	2200	0.7	0.3	1.5	19	0.237	0.763	-0.117	1.18
	13:50	4:00	240	2150	8.0	0.4	2	21	0.315			1.20
	13:55	4:05	245	2059	0.7	0.3	1.5	22.5	0.237			1.23
	14:00	4:10	250	2072	0.7	0,3	1.5	24	0.237			1.25
	14:05	4:15	255	2136	0.7	0.3	1.5	25.5	0.237			1.28
	14:10	4:20	260	2117	0.9		2.5	28	0.394			
	14:15	4:25	265	2107	0.7	0.3	1.5	29.5	0.237			1.33
<u> </u>	14:20	4:30	270	2202	0.8		2	31.5	0.315		<del></del>	1.35
	14:25	4:35	275	2105	0.8		2	33.5	0.315			1.38
1	14:30	4:40	280	2100	0.7		1.5	35	0.237			1.40
<u> </u>	14:35	4:45	285	2086	0.7		1.5	36.5	0.237			1.43
<b>1</b>	14:40	4:50	290	2101	0.7	0.3	1.5	38	0.237			1.45
	14:45	4:55	295	2116	0.9			40.5	0.394			1.48
	14:50	5:00	300	2109	0.8		2	42.5	0.315			1.50
	14:55	5:05	305	2111	0.9		2.5	45	0,394			1.53
	15:00	5:10	310	2100	1	0.6		48	0.473			1.55
	15:05	5:15	315	2112	1	0.6		51	0.473			1.58
	15:10	5:20	320	2141	1.1		3.5	54.5	0.552			1,60
	15:15	5:25	325	2163	1	0.6	٠3	57.5	0.473		-0.278	1.63
	15:20	5:30	330	2136	1	.0.6		60.5	0.473			1.66
	15:25	5:35	335	2093	1.1	0.7	3.5	64	0.552			
	15:30	5:40	340	2136	1	0.6	3	67	0.473	0.527	-0.278	1.71
	15:35	5:45	345	2132	1	0.6		70	0.473	0.527	-0.278	1.73
	15:40	5:50	350	2111	1.1		3.5	73.5	0.552			1.76
	15:45	5:55	355	2114	0,9			76	0.394			1.78
	15:50	6:00	360	2106	1	0.6	3	79	0.473	0.527	-0.278	1.81

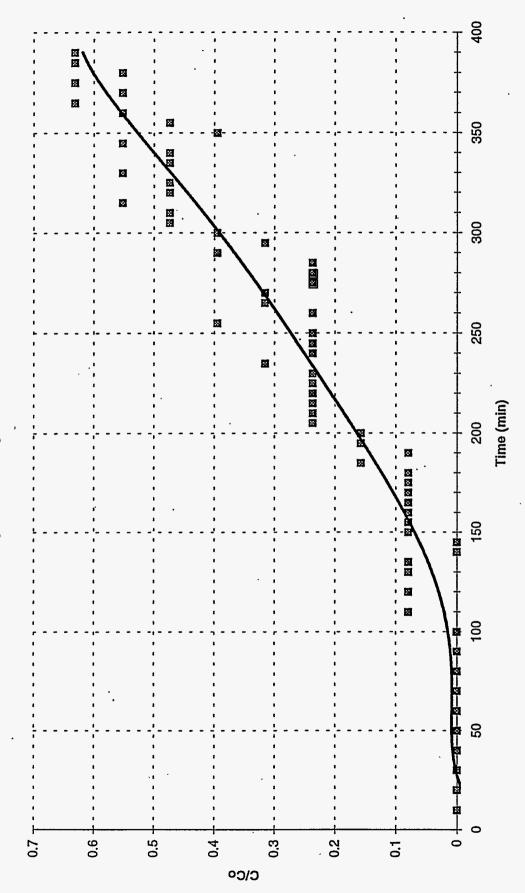
ICF KAI	SER HAI	NFORD	COMF	PANY	315 Filter Plant, 300 Area				2160	GPM Tracer	Test	
Date	e: 3/23/95				Ba	ckground Fluori			0.40 mg/L		· · · · · · · · · · · · · · · · · · ·	
	Average	test flow =	2127 gpm	(8050 L/min)	Fluoride loss due to alum ~ 0.20 mg/L					(16%)		
	Theoretical	Resedence	Time (T)=	199 min	App	olied Fluoride Do	osage (Co) =	580.0 ml/min	(1.27 mg/L)			
								· · · · · · · · · · · · · · · · · · ·				
					Fluoride	Tracer	Incrimental	Cumulative				
	Time	Time t	Time t	Flowrate	Measured	concentration	Area .	Area	C/Co	1-C/Co	Log10(1-C/Co)	ŧ/T
		(h:mm)	(min)	(gpm)	(mg/L)	(mg/L)	(mg-min/L)	(mg-min/L)				
	15:55	6:05	365	2128	1.1	0.7	3.5	82.5	0,552			1.8
	16:00	6:10	370	2114	1.2	8.0	4	86.5	0.631	0.369	-0.433	1.8
	16:05	6:15	375	2087	1.1	0.7	3.5	90	0.552			1.8
	16:10	6:20	380	2111	1.2		4	94	0.631	0.369	-0,433	1.9
	16:15	6:25	385	2112	1.1	0.7	3.5	97.5	0.552	0.448	-0.349	1.9
	16:20	6:30	390	2107	1.2	8.0	4	101.5	0.631	0.369	-0.433	1.9
Feed Off	16:25	6:35	395	2143	1.2		4	105.5	0.631	0.369		1.9
	16:30	6:40	400	2115	1	0.6	3	. 108,5	0.473	0,527	-0.278	2.0
	16:45	6:55	415	2131	1	0,6	9	117.5				
	17:00	7:10	430	2153	1	0.6	9	126.5				
	17:15	7:25	445	2108	1	0.6	9	135.5		·		
	17:30	7:40	460	2112	1	0,6	9	144.5				
	17:45	7:55	475	2108	1	0.6		153.5		ļ		
	18:00	8:10	490	2088	1	0.6		162.5		ļ	<b></b>	
	18:15	8:25	505	2127	1	0.6			····			
	18:30	8:40	520	2131	0.8		6					
	18:45	8:55		2134	1	0.6						
	19:00	9:10		2140								
	19:15	9:25	565	2140						1		
	19:30	9:40	580	2129		0.5	7.5			ļ		<del></del>
	19:45	9:55	595	2134	0.8	0.4						
	20:00	10:10	610	2142	0.6	0.2	3	215				
	20:15	10:25	625	2126	0.8	0.4				ļ		
	20:40		650	2131	0.6	0.2	5			<u> </u>		
	20:45		655	2126	0.6	0.2	1	227		<u> </u>	<u> </u>	
	21:00		670	2120			0				<u> </u>	
	21:15			2126	0.4	0	0					
	21:30			2119	0.4		0	447				
Calculated	Resedence Ti		186 min		Mass Fluoride injected = 4032 g							
		,				Mass Fluoride					,	
			0.07			ماد مسال ۱۹	Decembered -	AEO/			•	

% Fluoride Recovered = 45%

Correlation Coefficient = 0.87

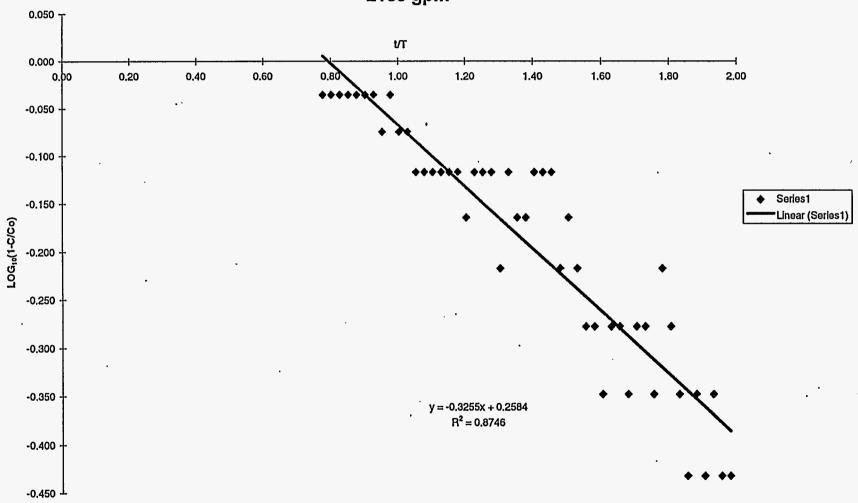
Chart 1 2160 GPM

300 Area, 315 Filter Plant C/Co vs. Time Graphical Analysis for T10



Prepared by ICF Kaiser

## 300 Area, 315 Filter Plant $LOG_{10}(1-C/Co)$ vs. t/T Numerical Analysis for $T_{10}$ 2160 gpm



### SUMMARY OUTPUT

Regression Statistics
Multiple R 0.935176
R Square 0.874554
Adjusted F 0.871885
Standard F 0.044638
Observatic 49

#### ANOVA

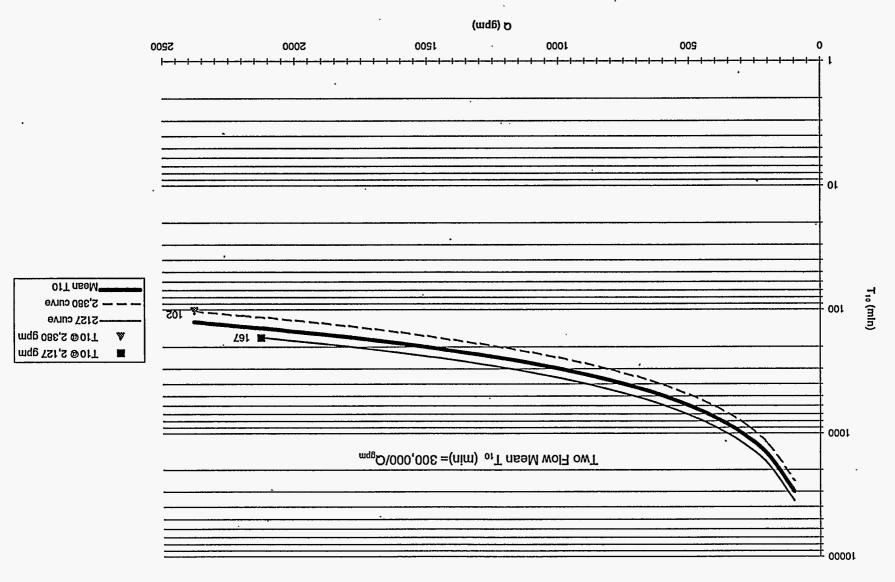
71110171					
	df	SS	MS	F	Significance F
Regression	1	0.652896	0.652896249	327.6634	8.03811E-23
Residual	47	0.093651	0.001992582		
Total	48	0.746548			•

	Coefficientsand	dard Err	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.000%.	Jpper 95.000%
Intercept	0.258437 0.0	025607	10.09238966	2.38E-13	0.206921811	0.30995128	0.206921811	0.30995128
X Variable	-0.32549 0.0	017981	-18.1014761	8.04E-23	-0.361663463	-0.2893158	-0.361663463	-0.28931577

WHC-SD-ER5480-ER-001, Rev.

#### T<sub>10</sub> 315 Filter Plant, 300 Area

Wolf .ev emiT noitneted



Prepared by ICF Kaiser

T<sub>10</sub> 315 Filter Plant, 300 Area

FLOW	T10						
2127 gpm	167						
2380	102						
ii							
2380 GPM	RESULTS	2127 GPM	RESULTS	3	AV	ERAGE	D RESULTS
						LOW	Average
FLOW	T10		FLOW	T10			T10
2380	102		2380	149		2380	· 126
2200	110		2127	167	-	2164	139
2100	116	· .	2100	169		2100	142
2000	121		2000	178		2000	149
1900	128		1900	187		1900	157
1800	135		1800	197		1800	166
1700	143		1700	209		1700	176
1600	152		1600	222		1600	187
1500	162		1500	237		1500	199
1400	173		1400	254		1400	214
1300	187		1300	273		1300	230
1200	202		1200	296		1200	· 249
1100	221		1100	323		1100	272
1000	243		1000	355		1000	299
900	270		900	395		900	332
800	303		800	444		800	374
700	347		700	507		700	427
600	405	•	600	592		600	. 498
500	486		500	710		500	598
400	607		400	888		400	747
300	809		300	1184		300	997
200	1214		200	1776		200	1495
100	2428		100	3552		100	2990
0			0			0	0

heorei	Calc tical Do	ulatio etentio	n No.	e and	80- <b>G</b> -00	ction

KAISER EN HANFORD	IGINEERS	CALCULA	TION IDEN	TIFICATION AN	D INDEX	Page of
Project No. & Name  Calculation Item	TRACER STUTION OF THE STUTION OF THE STUTION RATE	NOIS OF	R 5480 300 F ENTION	Calculation TLTCR TRES	O FLU	PLANT
These calculations apply	to:			•		
Dwg. No.		-		Rev. No	<u> </u>	•
Dwg. No.		•		Rev. No		-
Other (Study; CDR)		· · ·				
	·.		· · · · · · · · · · · · · · · · · · ·		Rev. No	•
<del></del>	etions  (On Calculation Dated Reason Voided					)
This calculation verifie	ed by independent "check	calculations?	Yes	_ No.		
Original and Revised Cal	culation Approvals:			Rev. 1	1	Rev. 2
	Signature/Di		111	nature/Date	1 4/	Signature/Date
Originator	and O. Bouch	11/5/94	rodd !	). Boucher 12/22		n W/ 200 3/28/95
Checked by	Munifrest	7 11/15/94	William	res FrAIN, 12/27	94 72~	in Co Failed 3/20 to
Approved by Checked Against Approved Vendor Data						
		<del> </del>	INDEX			· · · · · · · · · · · · · · · · · · ·
Design Analysis Page No.	•			ription		
	OBJECTIVE					•
	DESIGN INPUT	,	MPTIONS,	METHOD, A	EFFRE	F1815
<del></del>	CALCULATION	<u> </u>				
			,			
	<del></del>					<del></del>

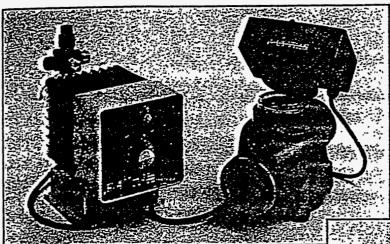
#### KAISER ENGINEERS Calc. No. ER5480-6-001 HANFORD Revision **DESIGN ANALYSIS** Page No. ICF-KH Client WO/Job No. ER 5480 THEORETICAL DETENTION, TIME Date 11/5/94 Checked ' By INJECTION QUANTITY 300 AREA FILTER PLANT Revised 12-22-94 By /1000 OBJECTIVE: THE PURPOSE OF THIS CALCULATION IS TO DETERMIN THE THEORETICAL DETENTION TIME AND THE FLUORI INJECTION CONCENTRATION FOR A TRACER STUDY DESIGN INPUTS: A TRACER STUDY WILL BE PERFORMED ON THE FLASH MIXER, THREE SEDIMENTATION BASINS, THREE FILTERS AND THE CLEARWELL THE HACH COHORIMETE DETECTS FLUORIDE BETWEEN O.Omg/l to 2.0 mg/l; THERE FORE, FLUORIDE WILL BE INVECTED AT 1.0 mg/e to 1.5 mg/ ASSUMPTIONS: THE PLANT WILL BE MAINTAINED AT THE TWO. FLOWRATES OF 2,400 GPM. AND 2,160 G-PM. BACKGROUND FLUORING CONICENTRATIONS WILL NOT VARY SIGNIFICANTLY. AVERAGE FILTER POROSITY = TO 40 %. METMOD: HAND CALCULATION WILL BE PERFORMED. REFERENCES: (1) DRAWING: NUMBERS: H-3-14193, 6 SHEETS H-3-14192, 6 SHEETS @ MONTHLY FLOW RATES FOR PLANT 19941: 3) CALCULATION ER 5480- G-004 (4) HANFORD ENVIRONMENTAL HEALTH FOUNDATION REPORT. FOR CY. 1992. 3 GUIDANCE FOR COMPLIANCE WITH FILTRATION 6) AND DISINFECTION REQUIREMENTS, EPA. , MARCH 199 6) LMI CATALOS SEE 31 PO. 1900 THE THEORETICAL DETENTION TIME AND CORRESPONGING INJECTION: RATE ISMAS FOLLOWS IT 15 15 FLUORIDE: 1300, = 2.3 HRS & PFIN, 1 = 46,4 L/min T300,2 = Z:6 HRS ) QFIN,2 41,8 2/min CALCULATION: THE PLANT UOLUME WAS DETERMINE USING ORGINAL ORAWINGS: ONCE THE VOLUME OF EACH UNIT IS KNOWN, THE VOLUME OF THE SYSTEM CAN BE DETERMINED, THE THEORETICAL DETENTION TIME CAN BE DETERMINED GIVEN

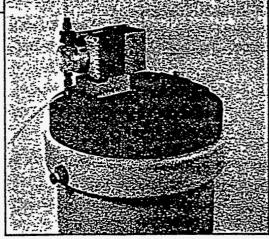
PEAK HOURLY FLOW RATE.

THE UDLUME OF WATER INTHE PLANT AND THE

WHC-SD-ER5480-ER-001, Rev. 1

### **FLUORIDATION**





#### CHEMICAL CHOICE

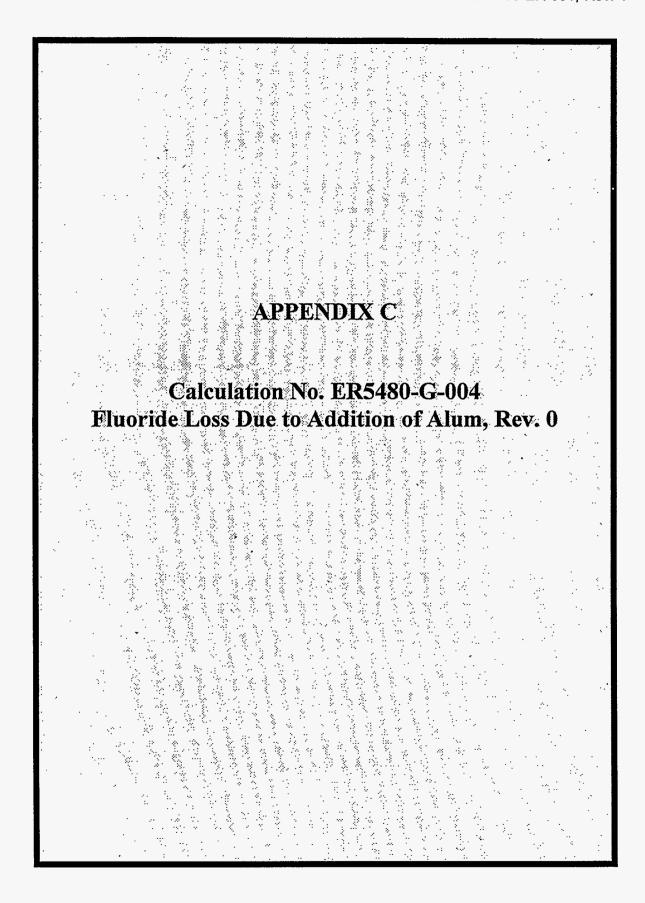
The three most common fluoridation chemicals are sodium silicofluoride, sodium fluoride and hydrofluosilicic acid. This brochure deals with solution feed systems, utilizing the latter two of these chemicals.

Chemical	Properties	Typical Comm. Strength	Fluoride Ion Content
Sodium Fluoride NaF	white, odorless powder/crystals	90-98%	44%
Hydrofluosilicic	: clear to yellow	30%	23.7%
Acid H <sub>2</sub> SiF <sub>6</sub>	liquid, pungent	25%	19.8%
	odor, skin irritant	22%	17.4%

The optimum concentration of fluoride in a public water supply has been set at approximately one part per million (1 ppm) according to the U.S. Department of Health and Human Services, Center for Disease Control 1982 Fluoridation Handbook. Levels may vary. Be sure to check with local health authorities when designing your fluoridation system.



8 Post Office Square Action, MA 01720 U.S.A. TEL (508) 263-9800 • TLX 95-1781 FAX (508) 264-9172



KAISER EN HANFORD	GINEERS	CALCULATI	ON IDENTIFIC	CATION AN	D INDEX	Page 1 of 3  Date Nov 11, 1994
Project No. & Name	itus and description of the example.  ECOBBY - Tracelly Loss from the land of the loss from the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land of the land o	on Study	25480;			
These calculations apply	to:			Rev. No		· · · · · · · · · · · · · · · · · · ·
Dwg. No.		•	1	Rev. No.		
The status of these calculations  Final Calculations  Check Calculations	ulations is:			)	. •	
Incorporated in Final C This calculation verific	od by independent "check	c calculations?		⊠ No □ No	. •	· · · · · · · · · · · · · · · · · · ·
	Rev. 0 Signature/E	ato	Rev. Signature		5	Rev. 2 iignature/Date
Originator	Duri G La	14 "/11/94				
Checked by	udd D. Bour					
Approved by						
Checked Against Approved Vendor Data						
Design Analysis Page No.  2	Objectives Desi	gn Tapols, C	INDEX Description	· · · · · · · · · · · · · · · · · · ·	,	

	RENC	5/NE	ER	25															954	80-0	<u>5-0</u>
<i>IANFOI</i>	NU					D	ESI	GN	AN	ALY	SIS					avis			7	<u>()</u> _ of	
	<del>-</del>	17.11			`	_		•			b No		_	ු ු			110	· —	<u> </u>	- "	· —
lient Jubject E	Tes		1				٠.	<del></del>						<u>)</u> By			<del>-</del>	<u></u>	1	عبد	1.
	Tuocido.		<del>yes</del>	. ;	<u>06</u> 0	to to to	دف	<u> </u>			1/ be									de	
ocation	III A	1 1			·					vise				Ву							
	1	1-1-	1 !		<u> </u>	+	<del> </del> _	<u>                                     </u>	-	-	- !	<del></del>	-				_	_	<u> </u>		
		_	<del>                                     </del>				1	-				+		<del>-                                    </del>	!!		_ <u>i</u>	1		1	<u> </u>
103	26511AE		++			-	+-	╁┤		+-	<u>_</u> _	+	++	<del>-</del>				┽	<u>i</u>	+-	<del>                                     </del>
	AL	use				40	<del>-  </del>		ـــــــــــــــــــــــــــــــــــــ	! <del> </del>	+2	ني ــــــــــــــــــــــــــــــــــــ		4/2		ab:	<u>ا ۔ ا</u>	<u></u>	£ 41	1	
	The s			1	161		<u>۱۳</u>		- F77	77.2		1260	ا				<b></b>	<del>' _ د</del>	316	G	
west	er by 91	عبدباء	4,000	1	OC.	ne -	this	ρί	S E E	5	PS1	طام	ન	U 2) C 1 d	٠	ìs	Cd	300	معط		
	1 9					)	. ] -	1-				į			1		!		T ;		
ont	o the	48(QH	<u>)                                    </u>	عفلع	فاين	يعــاد	ces	المما	Bu		<u></u> [2	الأصي	ma	تخم	400	_æ	<u>_4</u>	ئەرەبى <i>ا</i> .	ان ابند ا	ater.	
<del></del>	<del></del>			1					!_				<del>}</del>	<del></del>					<del></del>	1	
A/53	(504) = 14.	3420	+3	را خة (	Hed	- (چ		<del>-</del> -7	AX(	04):	-4-5	رخح	OH!	-14:	3 Hz	D-	+-6	20	$\frac{(1)}{2}$	, .	!   ,-
		++	++	-+-	<del>:  </del>		i			-		<del>-   -</del>	1	-	-						i'. 1
		++	1 1	<del>-!</del>		<del></del>					!_	<del></del> -	1 1	<u></u>	1		<del></del> ;			:	<del>                                     </del>
5	Flyndik			~ લેતે.		£3.0	<u>-</u>	ئے۔ ئدہ ﴿		السائد المائد			<del> </del>	e m	٠	الحا	 Ł		 Jhe		:
	e Fluorida														1			;		- 	1
5400	भ दि १७६	ارتدار	علم ا	4 7	JU_	العو	لحه				. ,			ŀ				i	:	;	
		1	11	!		<u> </u>	<u> </u>	1	· · · · · · · · · · · · · · · · · · ·	. 1		_L.	<u> </u>	!	! !			_ !	!_	· [	l :
			<del>                                     </del>	_;		<del></del>	_;		<u> </u>		i 		1 !		· ;	;	; 	!	1	·	:
	N INPUT				. !	<u> </u>	·						·		<del></del> -					<del></del>	.·
	J		<del>! !</del>	<u></u> .			_!	<u> </u>	<u></u>			_'	<u>.</u>	_ <u>i</u> _	<del>!</del>	<u></u>			<u>-</u> -		<u></u>
<u>CK</u> ·J	TERIA:	<del></del>	 ,		<del>:</del> :								-!		<u> </u>						
THE STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF STATE OF	The M	anina.	م_طرا م	اائاسو	ble	-5(0	arid	le.	حومع	ج مارد	طراح	n in	the	ر و	   1 <del> </del>	210	60	ր	משע ע	ret	
																			•	•	
स्र	ived 2 pp	m be	دهرياجي	e_th	خـــاً	eguil	pner	4	used	, to	test	45	د اح	ಬ್ಯೂ	11 1	yor	ide	. he	×5. €		
	det much	نحوطاب	-Cavé	يخير	10	9.0	, bbu		<u>、</u> ₩&	אזור	. 015S	いるの	, 4 <u>h</u> e	7.7h	۰. ۳	3- <b>4.</b> 	[-u,	۲ <	, Jwen	ν. <del>μ</del> ;	 i
	. · · · · · · · · · · · · · · · · · · ·	<del></del>																			
	alum will	_,,0_	١		2.0			1	3.			70:		•				<b>.</b>	44-,4	7.11.J.	
Sta	ted theat	ماسم	عططيا	101_1	h +	يهور	<u>کچی</u>	0	ea!	يحال	الحرير	reat	ment	>ام _	, tr	to	be	<u>ئ</u> ب	(ow	5	
		:		<del></del>				<u></u>				<del></del> -	<del></del>							;	;
_st	20 ppm.	We_	سيدال	<u> ఆస్ట్రల</u>	-2	مم ه	m1	<u> ۲</u>	_d&	بخرس	الماناها	<u>-</u>	وت م	م. إه	\$ <b>5</b>		:		<del></del>		
			+ +	+		<del></del>					· · ·		+ :	<del></del> ;	:			<del></del> :			 }
',	<del></del>	<del></del>	++				<del></del> ;	<del>-</del> -	}	<del>;</del> -	·:		-	;	· <del></del>	·				:	
<del></del>	,	2			$\overline{}$																
									3						_		***		_		<b>!</b>
								;	. <u></u>	,					:						
	1			· · · · · · · · · · · · · · · · · · ·											<del></del>	· ·					
				· · · · · · · · · · · · · · · · · · ·				;					1				:	-			

KAISER	ENGINEERS			Calc. No. ER5% Revision	
,,,,,,,		DESIGN ANALY	SIS	Page No. 3	of 3
Client	ICF'KH.	. MO\1º		34	
	riter loss dies to addition		Nov 11,1994 By	71108	Land
Location Alu	m Araba Araba	Revise	11/11/11	/ roda (). Opt	xenu
Location				!	
			1 1 1 1	1 1 1 1 1 1	
	6.0				
	1				<del>                                     </del>
<u> </u>	5.0		1		
	+		3	1 + +	<del>                                     </del>
	E E			+++	
	4.0			+++	+ +
				1 1	<del></del>
	3			++-	+++++
	3.0		·	† † †	
1 !!!					
	3 z.0	A			<u> </u>
		1		! !	: [
				·	
				<u>: - ! - </u>	·
<del> </del>			·		_ii
					<u> </u>
	0 100	200 -300	400 500	600.	
		ALUM DOSAGE -	ppm	بيو، ب <u>ند</u> ب	
				1	
71.	La Cia La Ide Han ald		from tosts	م مطالعة	····
1.00	bover figure 15 the plat	1-6- 0-14-1-0-0143		عديد والأورب الماء والمادة	, P
and Sta	Henberg en Fluoride re	movel of various	olum doses	()	, (
' ' !   '			·		·
RESUL	<u>75:                                    </u>				<del></del>
	A H - I - N - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		. 18	لا أمال من المالك	
	on the above plot, we		nn	mar cencerna	1 .
& Flu	sale is reduced to	7 pp. (5,9%) los	53 ) with & 20pp	م ماسم فعمره	,,
I	<del></del>		<del></del>	·	<del></del>
Thus;t	he alon will not great	y effect the fly	unit-added to	the system or	
I	<del></del>				<u></u>
, , , , , , , , , , , , , , , , , , ,	socer study. The study	לדייה ואלכנו פו מיינ	mppeil. Is. numithous	اه تحت م ۱۱۹۶۰ م ۱۹۰۰	Harri-
Com E	e assumed.				
(1) (ulp,	Handbook of Public Wote	- Syntens, 1986. 1	.456		
• •		7.1		54-4300-037 KEH-	0037.00 (06/92°

C-3

# 

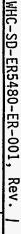
The second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of th

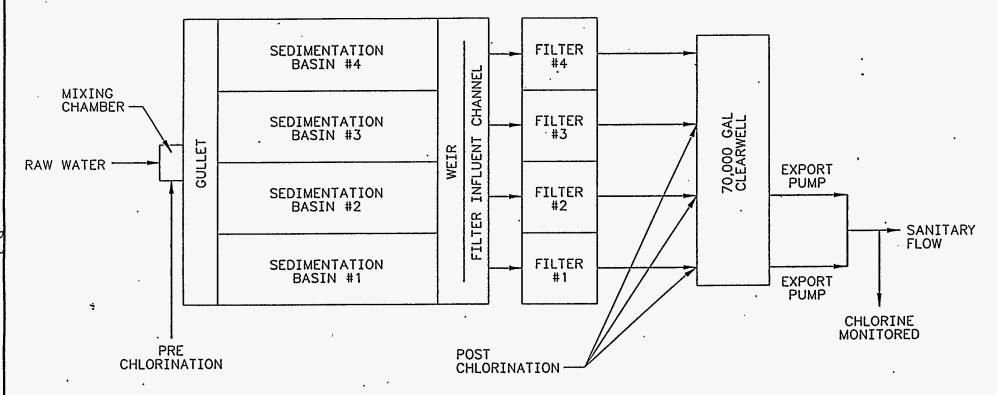
and the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second o

the control of the process of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the co

that de la prime an paper de la part des references de la particular de la particular de la particular de la p

andreas de la proposición de la composição de la composição de la composição de la composição de la composição La composição de la composição de la composição de la composição de la composição de la composição de la compo





- (1-BASIN IN WINTER, 2 OR 3 DURING SUMMER)

ICF KAISER HANFORD		ENGI	NEERING SKE	тсн	
Attachment to Or Description: 300 AREA WATER TREATM	ENT	PLANT	Prepared by: BA LORENZO Checked by:	Sh of 1 Cadile ES5480E1	Rev O

•

. . . .

\_\_

:					
			•		
		•.		•	
			•		
					:
			•••		
				Control of the Control of the South	
			٠		
				T	
:					
		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon			
			at V	X	
	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon				
			٠.		
			e		
			e <b>t</b>		
::					
· •. •.					
•					
			:		

Tracer Study Evaluation Work Sheet  Evaluation by: T. Ambalam  Date: April 3, 1995  Utility Name: Dept of Energy Richland Operations  Treatment Plant/ Facility Name: 315 Water Treatment Facility  Basin/Treatment Train Designation: 418408 Flashmixer: Sedementation basins,  Sample Point Designation: Sample Tap off clearwell discharge line filter  Plant Flow Rates: 2,400 gpm (Q,) Pezk/Design Flow [MgD/GPD/gpm]  Basin Volume: 424.000 gal(v) [cubic feet/gallons]  Theoretical detention time: 177.min (T) [days/hours/minutes]  Study flow rate:
Multiple Flow Rate Study: (Equal increments required)
$Q_1 = 2.400 \text{ gpm} \text{ [MGD/GPD/gpm] ((=QP))}$
Q= 2,160 gpm [MGD/GPD/gpm] (0.90 QP)
Q <sub>3</sub> = [MGD/G7D/gpm] (= Q <sub>3</sub> -2)-
Ω <sub>4</sub> = [MGD/GPD/gpm] (> 0.91 Ω <sub>k</sub> )
D . Single Flow Rate Study:
Q_=[MGD/GPD/gpm] (> 0.91 Q <sub>p</sub> )
Sasin Water Level = 10.8 feet (depth)
Normal Basin Water Lavel = 10.8 feet (depth)
Water temperature: Test Period 42.5-46.2 •F
Normal Temperature for Season 43-51 •F
Seasonal Variation: Winter Spring Summer Fall
Maximum (*F) 50 59.5 75.2 68.4
Average (*F) 43.2 51.1 67.6 55.8
Fall ('F)
Tracer Selection
Chemical Tracer: Sodium Fluoride Dose: 1.21-1.27 ppm
Note: Recommended decage for chloride a 20 ppm if background chloride levals are a 10 ppm;
·
Recommended dorage for fluoride 1< C, <2 ppm;
Abodimine WI is acceptable is maximum concentration is , 10 pps, drinking water concentration < 0.1 pph, exposure is brief and infraquent, and tracer concentrations should be 2 pph;
Common tracer chemicals not recommended for use are Abodamine E: potassium permanganate; alum; oblorine; and sodium carbonate.
Compatibility with potable water usage : Yes
Background levels of tracer in raw water: 0.4 ppm
Feeding equipment & methods: LMI Model 28850 Fluoride saturator
as an electronic metering pump

States of the exercise of the source of the tracking wife for

		: •	<b>-</b>
Consumer ac	ceptance of tracer chemical: Yes		,
		:	
Test Proced	ure		
	-dose method		
_			
_	-dose method		
	cion & Sampling:	J-11-1-1	. •
_	ling Period: 10.9-11.7H [days/hours/m	Tunnes! (c'l	
t, c			
~	ling Frequency: 2-5 min Acceptabl		
1	Sampling required every 10 minutes for first 10 minutes for first 10 minutes for first 10 minutes during re	dataca ton terriuria :	smbired berroct
. sampl	ing continued until pready-state effluent concen	station is reached bey	erd c,.
	:		•
· "·	•		
Heal	th concerns:	•	
· Is e	Ifluent tracer concentration limited?	Yes R 2	10 D
Maxi	mum level: 1.5 ppm;		•
How	is concentration maintained: Flow ra	tes maintained	l to ensure
con	centrations do not exceed 2.0	ppm	
			`
Step	-dosa method:		
·Trac	er addition = sampling period? Yes	E ON D	
Slug-dose m	•		
	Instantaneous injection period:	t, (t.< 2%	T)
•	Is injected mass based on basin vol		
	Yes D No D	ene capazi to prop-	2002 22702.
			•
	Density current effects (Mitigation	eliosta):	• • •
•			
		· ·	
Tracer reco	very:		•
. Is a	lum used in plant treatment?	Yes Q No D	
90%	rracer recovery? . Yes D	No A	/ -
Data Evalua	tion:		END DATE 7-25-95
Eval	uxtion technique: graphical H	numerical M	
T,. =	300,000/Q minutes		M 12.05
	Q=Flow (gpm)		1-05-10

Andreas and the second