

**MONTHLY PROGRESS REPORT
FOR SVE PILOT TEST AT IR10-1, BUILDING 123
HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA**

**Contract No. N67474-98-D-2076
Contract Task Order No. 0033**

**Document Control Number 1198
Revision 0**

March 30, 2001

Submitted to:

U.S. Department of the Navy
Southwest Division
Naval Facilities Engineering Command
1220 Pacific Highway
San Diego, California 92132-5187

Submitted by:

IT Corporation
4005 Port Chicago Highway
Concord, California 94520-1120



IT Corporation

4005 Port Chicago Highway
Concord, CA 94520-1120
Tel. 925.288.9898
Fax. 925.288.0888

A Member of The IT Group

March 29, 2001

Ms. Joyce Howell-Payne, Code 06CHJHP
SWESTNAVFACENCOM
1230 Columbia Street, Suite 1100
San Diego, California 92101

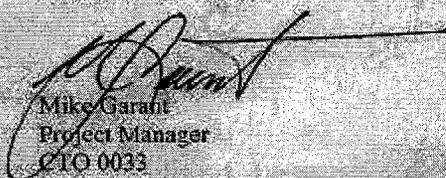
Attention: Mr. Martin Offenhauer, Code 06CH.MO.RPM
Contract No.: N62474-98-D-2076
Contract Task Order No.: 0033
Subject: Transmittal of Soil Vapor Extraction (SVE) Treatability Study (TS) Monthly Progress Report for Installation Restoration (IR) Site 10-1 at Building 123, Hunters Point Naval Shipyard (HPNS), San Francisco, California

Dear Mr. Offenhauer:

IT Corporation is pleased to submit three (3) copies of this progress report for the SVE TS testing currently ongoing at the IR Site in Parcel B of HPNS. The progress report provides a status update on the SVE TS activities and the general performance of the system. This report specifically covers the period of SVE operations for the month of February 2001. Data collected during the treatability testing were summarized and presented in the report. In addition, a brief evaluation and discussion of test results with respect to the SVE treatability performance were presented in the report.

IT will continue to submit the progress report on a regular basis throughout the entire SVE TS period for this and other IR sites where SVE treatability studies are performed. If you have any questions regarding this report, please do not hesitate to contact me at (510) 740-5812.

Sincerely yours,
IT CORPORATION



Mike Garalt
Project Manager
C/O 0033

Enclosures

pe: David B. DeMars, Code 06CHDD, Lead RPM HPNS
Navy Basic Contract File, Code 02R1.NJ
Project File

CONC029MAR01RAC20033 doc 1198.0

EPA-West Contract No. N62474-98-D-2076
DCN: 1198.0
Monthly Progress Report

Table of Contents

List of Appendices	i
Acronyms and Abbreviations	ii
1.0 Introduction.....	1-1
1.1 Activities Completed During Previous Reporting Period.....	1-1
2.0 Data and Results Presentation	2-1
2.1 Effective Radius of Influence.....	2-1
2.2 System Extraction Flow Rate and Volatile Organic Compound Mass Removal	2-1
2.3 Vapor-Phase Carbon Treatment.....	2-1
2.4 Individual Well Performance.....	2-2
3.0 Activities Anticipated for Next Reporting Period.....	3-1

List of Appendices

Appendix A Soil Vapor Extraction System Performance Plots

Acronyms and Abbreviations

cfm	cubic feet per minute
IT	IT Corporation
PID	photoionization detector
ppmv	parts per million by volume
SVE	soil vapor extraction
VOC	volatile organic compound

1.0 Introduction

This field activity report has been prepared to provide progress information to the Department of Navy, Southwestern Division, concerning the soil vapor extraction (SVE) treatability testing being conducted at Site IR10-1 in Building 123 within the Hunters Point Naval Shipyard, San Francisco, California. The treatability pilot testing is currently being performed by IT Corporation (IT) under the Remedial Action Contract N62474-98-D-2076, Contract Task Order Number 0033.

This report covers the period for the month of February 2001. Field activities performed in this reporting period are summarized in Section 1.0. Test data collected were summarized, reduced, and are presented in Section 2.0. Subsequent activities to be covered in the next reporting period are highlighted in Section 3.0. Data summary tables and figures included in Appendix A present trend plots.

1.1 Activities Completed During Previous Reporting Period

Activities completed during the previous reporting period continue to be associated with the constant-rate testing of the SVE pilot-scale system. The constant-rate test entered into the third month since its commencement on December 6, 2000. The SVE pilot-scale system operated 24 hours daily, with system operation being monitored weekly. System influent and effluent samples were collected once every two weeks.

As the influent volatile organic compound (VOC) concentration had reached to the first asymptotic level, an attempt to monitor for subsurface VOC level rebound was made. On February 26, 2001, the SVE unit was shut off to allow subsequent monitoring for signs of contaminant rebound. While the system was inoperable, no monitoring activity was conducted. System performance observations made during the constant-rate test are highlighted in Section 3.0.

20 Data and Results Presentation

This section briefly discusses the performance of the SVE pilot test system based on results observed in the following four areas:

1. Radius of zone influence
2. Extraction flow rate and mass removal
3. Carbon treatment
4. Individual well performance

2.1 Effective Radius of Influence

Based on the field data collected to-date, the effective radius of influence fell within the range of 20 to 40 feet, with an average of 30 feet.

2.2 System Extraction Flow Rate and Volatile Organic Compound Mass Removal

The total extraction airflow was maintained between 450 and 500 cubic feet per minute (cfm), while the system influent vapor concentration continued to show gradual decreases (see Figure 1 in Appendix A). The rate of VOC mass extraction from the vadose zone decreased from 0.008 to approximately 0.006 pound per hour. Figure 2 plots the VOC (based primarily on trichloroethene) mass extraction rate over time. Figure 3 presents the cumulative VOC mass extraction versus hours of operation. These two figures are included in Appendix A. As shown in Figure 3, the cumulative VOC mass removal from the subsurface since the commencement of the constant-rate test on December 6, 2000, was approximately 45 pounds.

2.3 Vapor-Phase Carbon Treatment

Based on the analytical results of the influent and effluent vapor samples collected from the vapor-phase carbon treatment units, the vapor treatment efficiencies were maintained near 100 percent (see Figure 4 in Appendix A), exceeding the local air emissions requirement of 90 percent removal efficiency. A photoionization detector (PID) was also used to monitor the influent and effluent vapor concentrations. As of February 26, 2001, the PID reading taken at the carbon treatment unit influent reached zero parts per million by volume (ppmv), the same as the effluent reading. PID readings continue to be used to monitor for potential signs of carbon breakthrough. No carbon breakthrough occurred during this reporting period. Vapor-phase carbon continued to effectively treat the soil vapor removed from the vadose zone.

2.4 Individual Well Performance

PID readings taken at the wellheads show that the majority of the SVE and vapor monitoring wells were approaching asymptotic levels during the month of February 2001. Most wells were measured with PID readings between 20 and 30 ppmv, with the exception of Well IR10SG043D, which exceeded 100 ppmv.

Since the system adjustment at the beginning of the constant-rate test, liquid entrainment into the SVE wells has been greatly reduced. However, because certain SVE wells (such as IR10VW03A) continued to yield substantial amounts of liquid with higher vacuum exerted at the wellheads, those wells were operating at relatively lower vacuum levels. As such, airflow yield from those wells were also restricted.

3.0 Activities Anticipated for Next Reporting Period

The SVE unit will restart and the influent VOC level will be checked for rebound. If VOC level rebound is observed, continuous operation of the SVE pilot-scale system will resume. System monitoring will continue on a weekly basis, with sampling for laboratory analysis on a biweekly basis. The system will continue to operate until another asymptote is reached.

APPENDIX A
SOIL VAPOR EXTRACTION SYSTEM PERFORMANCE PLOTS

Figure 1 -- Plot of Influent Soil Vapor Concentration Over Hours of System Operation at IR10-1, Building 123, HPS, SF, CA

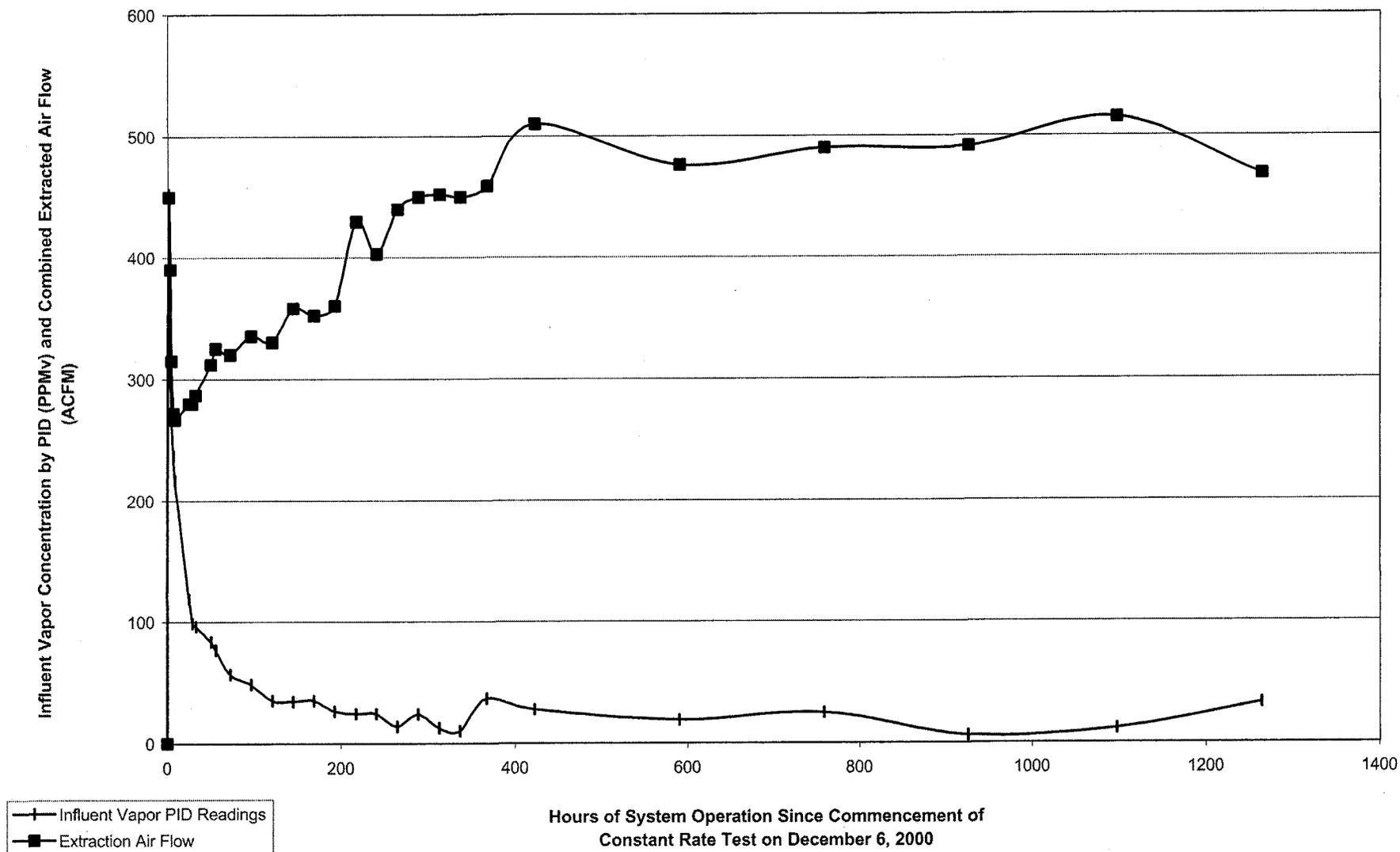


Figure 2 -- Plot of VOC Mass Extraction Rate Over Hours of System Operation at IR10-1, Building 123, HPS, SF, CA

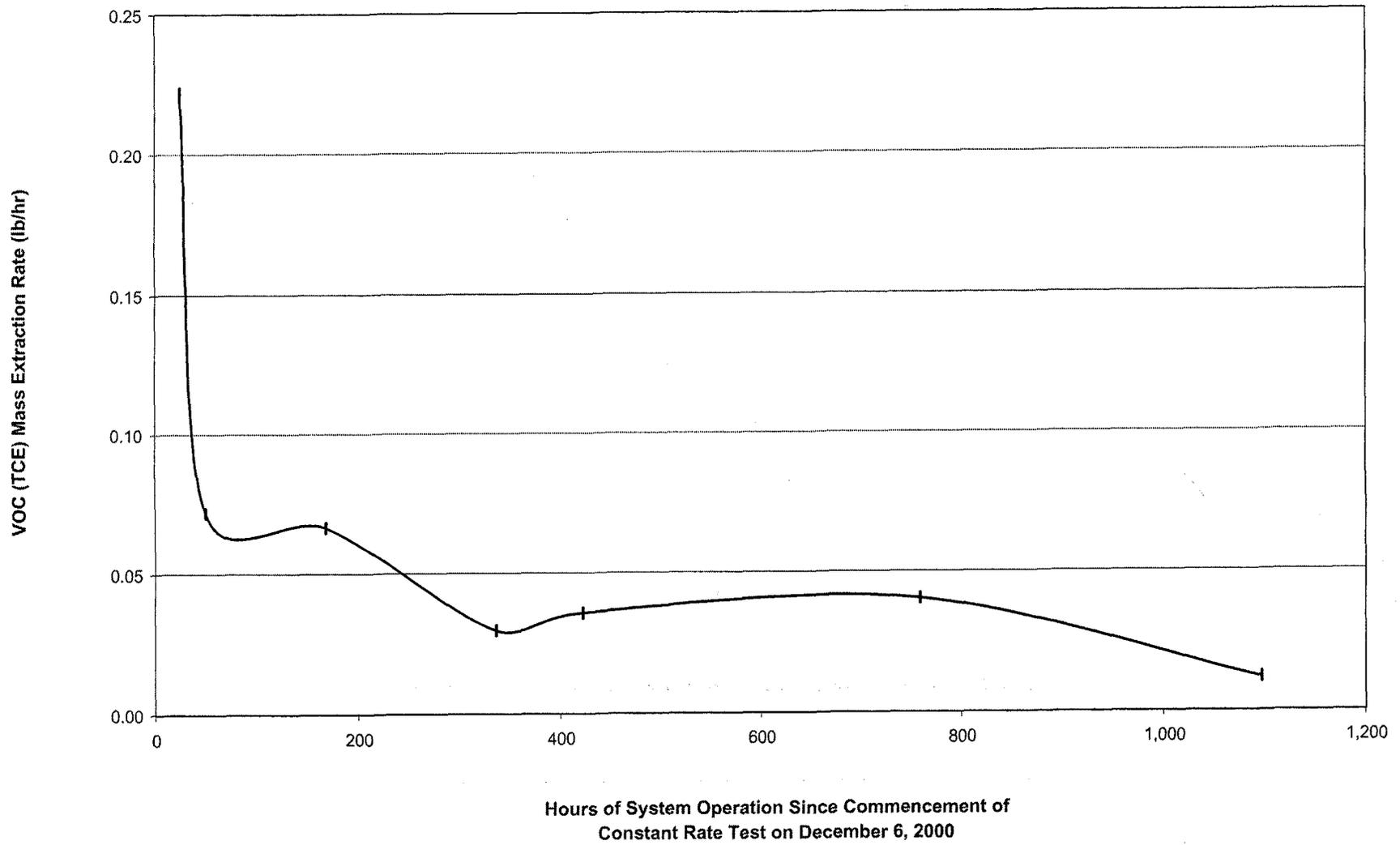


Figure 3 -- Plot of Cumulative VOC Mass Extraction Versus Hours of System Operation at IR10-1, Building 123, HPS, SF, CA

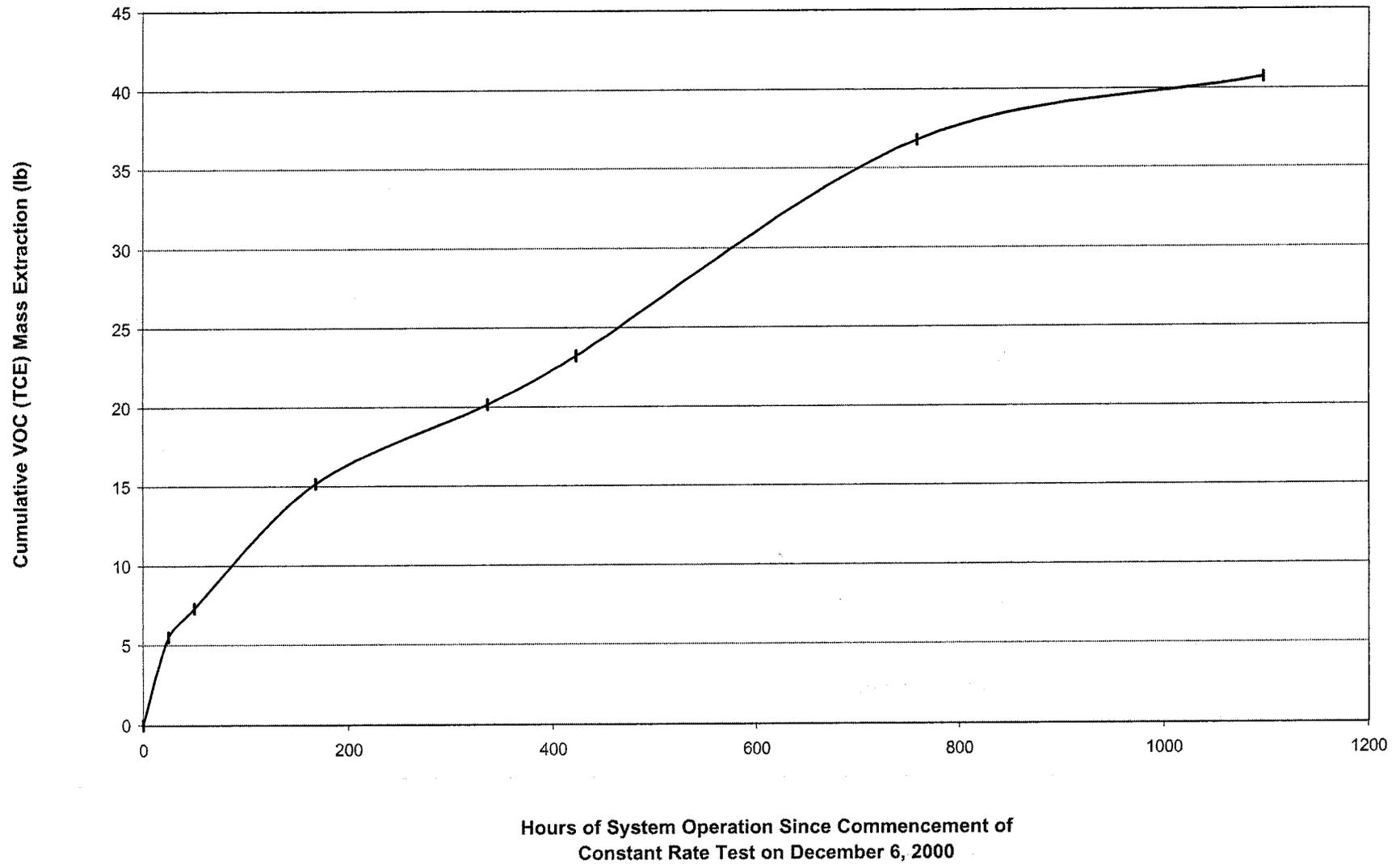


Figure 4 -- Plot of Carbon Treatment Unit Influent and Effluent Concentrations Versus Hours of System Operation at IR10-1, Building 123, HPS, SF, CA

