

US EPA ARCHIVE DOCUMENT

QUALITY ASSURANCE PROJECT PLAN
FOR XL PROJECT
AT
MOLEX INC. PLATING DEPARTMENT
700 KINGBIRD ROAD
LINCOLN, NEBRASKA

RCRA IDENTIFICATION NUMBER
NED000316646

NATIONAL POLLUTANT DISCHARGE
ELIMINATION SYSTEM NUMBER (NPDES)
NE0131776

Paul Eckerson 3-23-99
Project Manager: Paul Eckerson Date

Iain Macdonald 3-23-99
Peer Reviewer: Iain Macdonald Date

Ronald L. Phillips 3-23-99
Safety/Environmental Engineer: Ron Phillips Date

Nick De Cintio 3-23-99
Plant Quality Assurance Officer: Nick De Cintio Date

David Doyle 3/23/99
Environmental Officer Project Coordinator: David Doyle Date

Ernest Arnold 4/5/99
Regional Quality Assurance Manager: Ernest Arnold Date

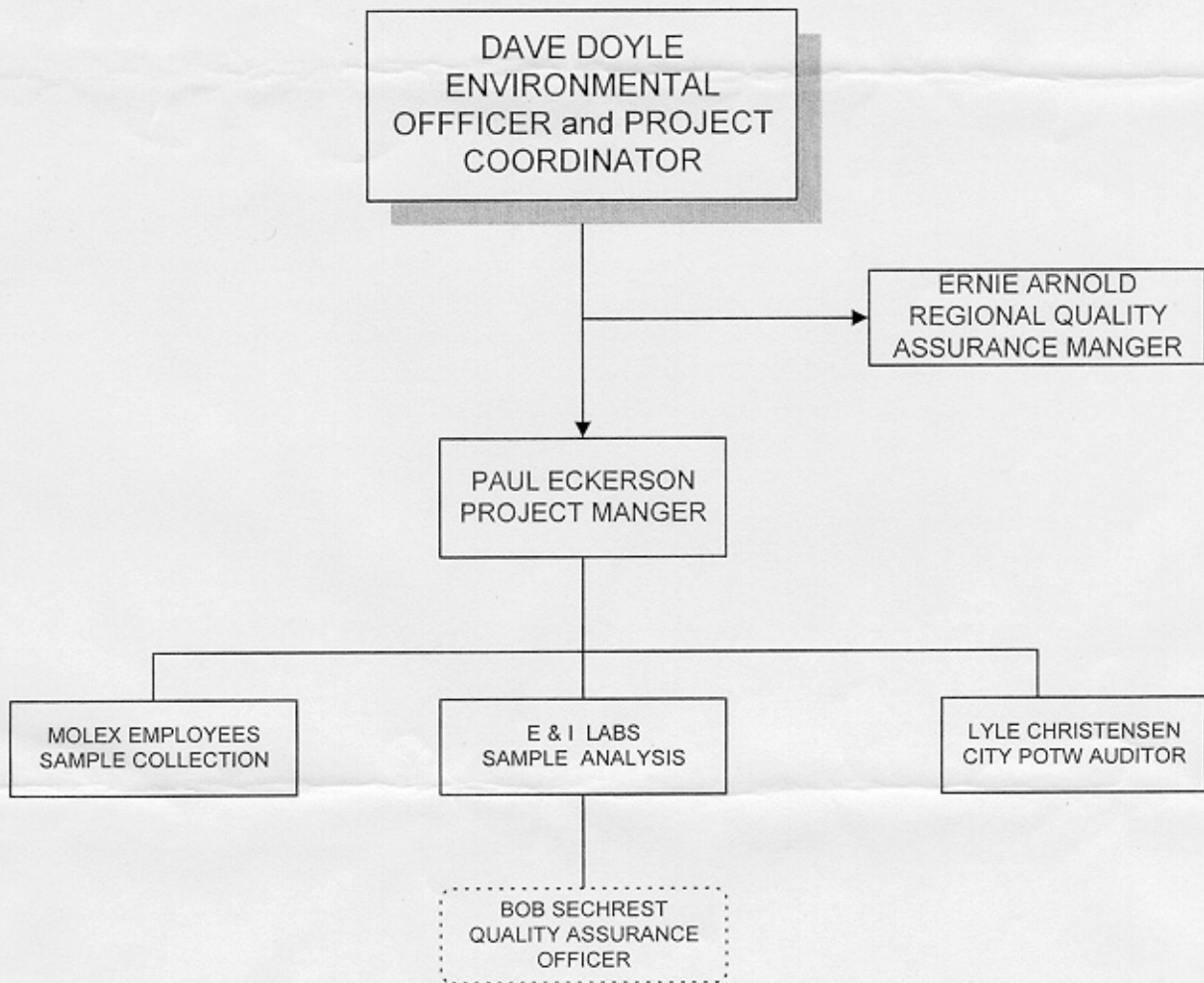
R7 QA Office
Rec'd 4/1/99
By meu
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1.0 Project /Task Organization

The purpose of this activity is to determine the physical and chemical properties of the three sludges that are generated at the Molex plating department at 700 Kingbird Road, Lincoln, Nebraska 68521, and the quality of the effluent stream that is discharged to the local POTW. Representative samples will need to be collected as they are generated. This sampling is required to meet the requirements of the XL Project. The following organizational chart lists individuals and their responsibilities.



The duties and responsibilities of the members are as follows:

Project coordinator- Oversee the entire project to assure all requirements are met to insure successful completion of the project.

Regional Quality Assurance Manager - Review and approve the Quality Assurance Project Plan and subsequent revisions. Provide oversight for the project as requested by the project manager .

Project manger - oversee and manage all activities at the project site that are required to successfully complete this project.

Molex employees - collect samples and record data as directed by the Project Manager per appropriate work instructions.

E & I Labs - provide analysis of samples and submit data results to the Project Manager.

Robert Sechrest - oversee and manage all analysis at E & I Labs to insure quality of results.

Lyle Chrstensen - reveiw data and oversee operations concerning the collection and analysis of samples collected at Molex during the XL Project.

2. Problem Definition/Background

The problem is to determine the feasibility of segregated waste water treatment. We hope to demonstrate that it can be a cost effective and environmentally superior method of treatment. A new plating facility was built by Molex at 700 Kingbird Road in 1996. A segregated waste treatment system was installed (in conjunction with the XL Project) that produces three different sludge byproducts. Better environmental results are expected and hopefully the sludges will have a greater value that will offset the additional cost associated with the segregated system

3. Project/Task Description

For this project, we will collect data on water usage, quality and quantity of the effluent and sludge generated. Financial information will collected on all aspects of the waste treatment system: cost, cost of operation, cost avoidance, and revenue from recycled sludges. Quality standards as required by our pretreatment permit, federal regulations, and the Project XL Variance will be followed. This data will be collected over a two year period from August 7, 1998 to August 7, 2000. Chain-of-custody documents and data reports will be kept for all sampling activities and results.

4. Quality Objectives & Criteria for Measurement Data

The object is to obtain useable and accurate data. Quality Assurance and Quality Control criteria are to be met. See attached diskette of analysis methods and measurement criteria. The intent is to demonstrate improved effluent quality as defined by our pretreatment permit.

5. Documentation & Records

All records and reports are located in the plating lab. These records will be kept for seven years as required by law. The following records and information will be kept: historical data from our old plating facility, quarterly and final reports, sampling logs, chain-of-custody forms, data reports, water usage records, sludge recycling information, city effluent analysis reports, and discharge monitoring reports. See variance for data requirements. Requested outside lab analysis is to be completed within 30 days. Attached are examples of logs and forms used.

6. Sampling Process Design

Samples will be taken according to the methods, procedures, and requirements of our pretreatment permit and our XL Project variance. The city monitors the effluent, and this data will be included in the quarterly and final reports. Lyle Christiansen is the contact at the Lincoln waste water treatment facility. Bob Sechrest is the contact at E & I Labs who we contract with to do our analysis.

7. Sampling Methods and Handling Requirements

All sampling methods are as required by pretreatment permit and project variance.

8. Analytical Methods & Laboratory Quality Control

The quality assurance officer at E & I Labs is responsible for corrective action relative to the method, and the project manager for the project is responsible for corrective action relative to the sample results/waste analysis. E & I Labs provides all the supplies and consumables for the sample collection and analysis. The acceptance criteria are provided in E & I Labs Quality Management Plan.

Table 1. Summary of Analytical Processes (detailed table on attached diskette).

Table 2. Summary of Analytes and Methods

Class	Compounds	Method	Analyst
Volatiles	39 compounds (1)	624	Robert Seachrest
Inorganics	chromium	218.1	Jeff Meisner
	copper	220.1	Jeff Meisner
	nickel	249.1	Jeff Meisner
	lead	239.1	Jejj Meisner
	zinc	289.1	Jeff Meisner
	cadmium	213.1	Jeff Meisner
	silver	272.1	Jeff Meisner
Cyanide	cyanide	335.2	Scott Buss

(1) See detailed table for specific listing of compounds.

Table 3. Summary of Quality Control for Analytical Processes

QC	VOCs	Inorganics	Cyanide
Initial Calibration	Min. of 7 points initially and when cont. cal. fails	4 points every run	7 points every run
Continuous Calibration	**should be every 12 hours	every 10 samples	NA (1)
QC Standards (2)	once per run	once per run	NA
Matrix Spike/Matrix Spike Duplicate	once per shift	every 10 samples	NA
Replicate	once per shift	every 10 samples	NA
Blank		once per run	once per run
BFB	once every 12 hours	NA	NA
Criteria	+/- 10% or 20%, depending on the analyte	+/- 20%	+/- 20%

(1) NA = Not Applicable

(2) QC standards: Traceable to National Institute of Standards and current.

9. Data Acquisition & Management.

Data from non measurement sources will include: data from old facility and city effluent and flow information from the old and current facility. Refer to the baseline report for Project XL. A copy of all forms used to collect data are attached. All data is reviewed and verified by E & I Labs or Paul Eckerson. All data is on file in the plating lab.

10. Assessments & Response Actions

Effluent analysis is monthly (per DMR requirements). Sludge samples are collected, per work instructions, from every filter press dump and analyzed quarterly per the requirements of the variance. Effluent quantity (water usage) is monitored and recorded daily. Chain-of-custody forms accompany all samples. Copies are on file in the plating lab. Work instructions employed in this process are controlled by our company's quality system. Paul Eckerson is responsible for system review and audits of data quality. Explanations will be provided where there is questionable data. Corrective action is the responsibility of Paul Eckerson and Bob Sechrest at E & I Labs. Final review of data will include Nebraska DEQ and Region VII.

11. Reports to Management

Quarterly reports are due 30 days after the end of each quarter (8 total). The final report is due 30 days after the end of the project (project end date is August 7, 2000). Reports are to include all information required by the project variance. Any discrepancies will be investigated and reported. Paul Eckerson is responsible for all reports. Periodic in-house assessments will be

conducted to insure adequate performance and to identify any QA problems. Reports are to be made to NDEQ (Bill Gidley) and Region VII (Dave Doyle).

12. Data Review and Validation & Verification Methods

Data review, validation, and verification for sample analysis is the responsibility of E & I Labs and is included in the attached diskette.

13. Reconciliation with User Requirements

For all outliers, explanations will be provided as is applicable.

14. Attachments

Attached are copies of all logs and forms used data collection for Project XL.

PLATING LAB WORK INSTRUCTIONS

TITLE: Sludge sampling procedure DATE: August 7, 1998

PAGE:1 of 1

WI#: PWL-0043

APP'D: *Paul E. Egan*

Procedure for Sludge Sampling

1. A sample must be taken every time the presses are emptied. This must be documented on the log sheet located on the nickel press.
2. Wear gloves and safety glasses when emptying press and taking samples. Care must be taken to avoid any contamination from foreign materials.
3. A 25 ml sample should be taken and deposited in the container provided. The lid to this container must be in place at all times to prevent evaporation of the samples.
4. Composite samples of all sludges will be analysed prior to shipment to recyclers.

24HOUR EFFLUENT SAMPLING REPORT

Molex Inc., 700 Kingbird Road, Lincoln Ne. 68521

Start Date: _____ Start Time: _____ Sampling for: _____

City water meter reading at end of sampling: _____

City water meter reading at start of sampling: _____

Total city water used during sampling: _____

Effluent water meter reading at end of sampling: _____

Effluent water meter reading at start of sampling: _____

Total effluent generated during sampling: _____

Date: _____ End Time: _____ Operator: _____

