STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT
160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5794

March 30, 1988

Mr. David T. Arceneaux
Superintendent, Environmental Control
Champion International Corporation
P. O. Box 87
Cantonment, Florida 32533-0087

Dear Mr. Arceneaux:

We have completed the second review of the Quality Assurance Plan prepared by Law Engineering as part of the Preliminary Contamination Assessment Plan (PCAP) required by the Consent Order entered into between Champion International and the Department on October 31, 1985. We are forwarding comments along with an annotated copy of your QA Plan. The revised document, addressing their comments and the needed corrections, must be resubmitted and approved before the PCAP may proceed.

If you have any questions regarding these comments or the QA Plan in general, contact John Labie at (904) 487-0505.

Sincerely,

Thomas W. Moody

Thomas W. Moody, P.E.
Special Programs Supervisor

TWM:rmd
Enclosures

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

For Routing To Other Than The Addressee	
To:	Location:
To:	Location:
To:	Location:
From:	Date:

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MAR 22 1988
Northwest Florida
DER

TO: Mr. Bill Kellenberger, Engineer IV
Northwest Florida District, Pensacola

FROM: Mr. John G. Labie, Environmental Supervisor II
Quality Assurance and Ambient Monitoring Section

DATE: March 9, 1988

SUBJECT: Quality Assurance Review; 86213C, Champion International Corporation Bag Manufacturing Facility, Revision No. 1; Submitted by Law Engineering, Inc.

We have reviewed the subject document and are returning to you our comments in the form of the attached review sheets and one annotated copy of the QA plan. The revised document, addressing our comments and needed corrections, must be resubmitted and approved before the initiation of sampling and analyses on this project.

If you have any questions concerning this matter, please let me know.

JGL/psl

Attachments (2): annotated QAPP
QAPP review sheets

cc: Ms. Carolyn S. Lewis (w/o attachments)
Mr. John Gentry, BWC (w/o attachments)
Mr. John Bond, ESE, W. Newberry Rd., P.O. Box ESE, Gainesville, FL 32602-3053 (with review sheets)

Quality Assurance
Bureau of Water Quality Management
(Form 1-84)

REVIEW OF QA PROJECT PLAN

Title 86213C, Champion International Corporation Bag Mfg. Facility, Revision No. 1;

Prepared by Law Engineering

Reviewed by John G. Labie

Review date March 1, 1988

Review

1. Title and DER approval page

   O.K.

2. Table of contents

   O.K.

3. Project description

   O.K.

4. Project organization and responsibility

   O.K.

5. QA targets for precision and accuracy of data

   The project description states EP Tox on metals, TOC, and priority pollutant metals will be done on water and sediment/sludge. The Table presented (3.2) only identifies soil methods. This needs also to include water methods for each parameter. Some of the soil methods identified are not those approved in ESE's Generic QA plan. TOC is not in the table 3.2 nor is EP TOX for the metals. The extraction procedure (3050) is missing for the sludge procedure (6010) that was identified. Check with the designated lab and complete the table.

6. Sampling procedures

   Pages after 4-3 are missing and page 4-3 is repeated.

   A galvanized pipe and brass foot valve should not be used. Stainless steel should be used as described in ESE Generic page 4-18.

7. Sample chain of custody

   Include examples of sample tags and seals. Retain bills of lading or other shipping receipts.

8. Calibration procedures and frequency

   See annotated page.

9. Analytical procedures

   This section may be referenced to Section 3 if it is all stated there.

10. Data reduction, validation and reporting

    O.K.

11. Internal QC checks and frequency

    O.K.

12. Performance and systems audits and frequency

    O.K.

13. Preventive maintenance procedures and schedules

    O.K.

14. Specific routine procedures to assess precision, accuracy, and completeness of data

    O.K.

15. Corrective action

    O.K.

16. QA reports to management

O.K.

17. Qualifications of Project Personnel

O.K.

Additional comments:

ESE has been requested to update and revise their Generic QAP to fully comply with HRS Certification and DER requirements instituted since its approval July 28, 1986. This may affect how portions referenced that are O.K. are handled in the field.

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LAW ENGINEERING
TESTING COMPANY

QA PLAN

FOR

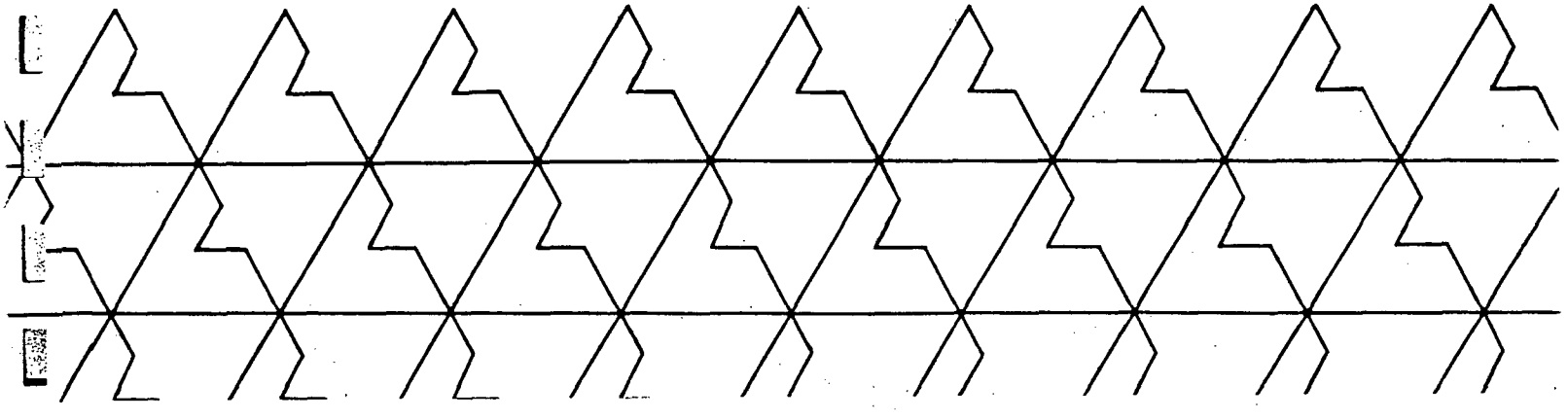
CONTAMINATION ASSESSMENT PLAN

CHAMPION INTERNATIONAL CORPORATION

BAG MANUFACTURING FACILITY, FLORIDA

LAW ENGINEERING PROJECT NO. HT-1671-86W

REVISED OCTOBER, 1987



LAW ENGINEERING

GEOTECHNICAL, ENVIRONMENTAL
& CONSTRUCTION MATERIALS
CONSULTANTS

October 16, 1987

Champion International Corporation
P. O. Box 87
Cantonment, Florida 32533-0087

ATTENTION: Mr. David T. Arceneaux

SUBJECT: **REVISED QUALITY ASSURANCE PLAN FOR CONTAMINATION ASSESSMENT PLAN**
Bag Manufacturing Facility, Florida
LAW ENGINEERING PROJECT NO. HT-1671-86W

Dear Mr. Arceneaux:

Law Engineering is pleased to submit this revised QA Plan for the Contamination Assessment Plan at the Champion Bag Plant in Cantonment, Florida. The revisions address the FDER review comments submitted to you by the Department on January 29, 1987. Information to address the comments was obtained from Ms. Jackie Hargrove of Environmental Science & Engineering Laboratories in Gainesville, Florida and yourself.

As always we appreciate the opportunity to serve you and look forward to continuing as your environmental consultant in the future. If you have any questions or comments regarding the QA Plan revisions, please do not hesitate to call.

Very truly yours,

LAW ENGINEERING

Kyle W. Wagoner
Geological Engineer

Owen D. Sveter
Senior Hydrogeologist

REGISTERED GEOLOGIST
CERTIFICATE NO.
15936
OWEN D.
SVETER
Date Signed 10/16/87
ARIZONA, U.S.A.

Richard A. Pearce, P.E.
Chief Engineer

KWW/ODS/cg
840chclr

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214-934-0800

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HOUSTON, TX 77040
713-939-7161

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Water Quality Monitoring &
Quality Assurance Section

QA PLAN

FOR

CONTAMINATION ASSESSMENT PLAN

Bag Manufacturing Facility

David O. Hearn — Respondent — 1/11/88 — Date

[signature] — Project Director Manager — 12/22/87 — Date

A. John Hall — QA Officer — 2/17/88 — Date

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Northwest Florida
DER

QA PLAN
FOR
CONTAMINATION ASSESSMENT PLAN
Bag Manufacturing Facility

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LIST OF FIGURES

1.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

This project will be managed by the following individuals:

David T. Arceneaux	Project Director/Manager
John Hall	Quality Assurance Officer
James N. Rockwell	Field Sampling Officer

In addition, the following firms will be providing consultant services:

Law Engineering	Engineering Design Consultant
Environmental Science and Engineering (ESE)	Analytical Testing Consultant

The Project Director/Manager is responsible for overall management of the project as well as liaison with the DER. He is responsible for all coordination of project work scheduling and consultant activities.

The Quality Assurance Officer is responsible for all aspects of QA/QC including sampling, field monitoring, sample handling, and monitoring of the consultant laboratory.

The Field Sampling Officer is directly responsible for actual field sampling and will personally supervise the collection, handling and shipment of all samples. He will also be responsible for all field test data and will sign the field log and all chain of custody documents.

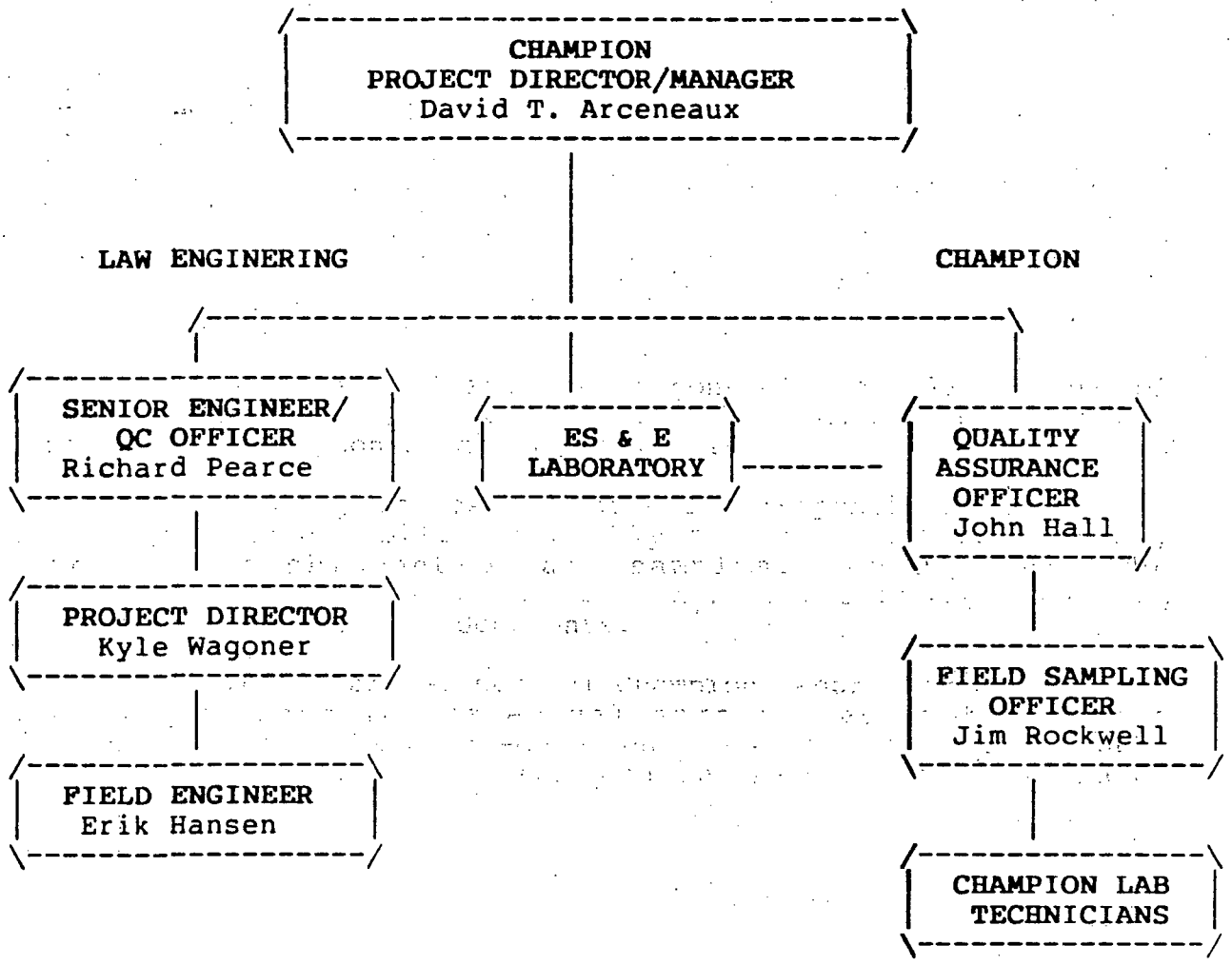
In addition to the above, several Champion laboratory technicians will be utilized in the actual sampling activity. These personnel are all Champion employees who report directly to John Hall, and will be under the personal supervision in the field of Jim Rockwell.

Law Engineering, as Engineering Design Consultant is responsible for designing the QA plan, for designing the testing protocol, and for assisting in the settling basin sludge sampling. Law Engineering personnel will report directly to Kyle W. Wagoner, who will be the consultant Project Director. Richard Pearce will be the Senior Engineer and Quality Control Officer. Erik Hansen will be the consultant Field Engineer.

Environmental Science and Engineering Laboratories is responsible for all laboratory analytical testing once the samples are shipped to the Gainesville, Florida laboratory. Laboratory project responsibility is outlined in Section 2, pg. 2-2 of the FDER approved QA plan for ES&E.

An over all organizational chart is included herein.

PROJECT ORGANIZATIONAL CHART



2.0 PROJECT DESCRIPTION

2.1 Background Information

This Quality Assurance Plan specifies the QA/QC procedures that will be implemented during the contamination assessment study of the impact of previous bag plant manufacturing activities at the Champion International facility located in Cantonment, Florida. This study is designed to meet the requirements of the Consent Order entered into between the State of Florida Department of Environmental Regulation (FDER) and Champion International Corporation. The consent order was issued concerning possible contamination resulting from past discharge of process wastewater from the facility's bag manufacturing plant to the mill wastewater treatment system.

Champion International recently acquired the Pensacola, Florida mill facilities from St. Regis Corporation. A bag plant was located at this facility which manufactured finished printed, non-printed, and protective coated paper bags. Bag printing was also performed at this plant with large, mimeo-type printers. Operation of the bag plant ceased before March 1, 1986.

At the bag plant, water soluble inks were used in the printing of paper bags. A continuous stream of water was passed over the printer stencil as an ink washup. The washup was recirculated until the ink solids in the washup reached a concentration of 3 to 10%, at which time the washup water was replaced with clean water. In the past, the ink saturated wash water was discharged into the plant's wastewater treatment system.

The ink washup was produced at a maximum rate of 2500 gallons of wash water per month, a small percentage of the 750 million gallons handled monthly by the wastewater treatment system. The untreated wastewater which included the bag plant discharge, would have entered the settling basin. Approximately 90% of waste water solids settle out in this basin. Thus, ink solids in the bag plant discharge would also have been expected to settle out in the settling basin. The sludges were removed from the settling basin and placed into sludge drying beds. The location of the settling basin and the sludge drying beds are shown on Figure 1. The dried sludges were removed from the drying beds as the beds were filled and were transported to approved landfills in Florida and Alabama.

Pb
Cd
Cr
EP Tox

In January, 1985, the Florida Department of Environmental Regulation (FDER) requested analyses of the ink washups for lead, chromium and cadmium using the EP Toxicity Test Procedures. At the time that these were requested, the bag plant was using high lead inks. The analyses were completed and submitted to FDER in March, 1985. These results indicated that the wash waters contained concentrations of chromium and lead which exceeded EP Toxicity Limits.

From early 1985 to February, 1986, only inks with low concentrations of the constituents of concern (lead and chromium) were being used. Additionally, waste process waters were put through an Alar system prior to entering the mill wastewater treatment system, so that high concentrations of heavy metal constituents were prevented from entering the system. The bag plant ceased operations before March 1, 1986.

In response to the consent order, a preliminary contamination assessment plan (PCAP) was submitted to FDER in March, 1986. The PCAP included a preliminary evaluation of potential contamination of surface and ground water sources. Based on the EP Toxicity tests of bag plant ink washups, extrapolations were made of potential concentrations in mill wastewater and sludges. The results of these extrapolations indicated that metal concentrations in the effluent resulting from bag plant discharges would not violate Class III stream standards. These extrapolations also indicated that metal concentrations in the sludge resulting from bag plant solids would not have exceeded EP Toxicity Limits. EP Toxicity tests of sludges in the settling basin and sludge drying beds were conducted while the bag plant was in operation. These tests showed metal concentrations below detection limits for EP toxicity metals, supporting extrapolation of metal concentrations in the sludge.

The original PCAP was not approved by FDER and subsequently a supplement to this PCAP was submitted. This supplement included a ground water monitoring program which was recommended to evaluate the impact of prior bag plant discharge on ground water quality. The recommended ground water monitoring plan was approved by FDER, in a letter to Champion dated August 11, 1986. Additionally, FDER requested sampling and analysis of sludges and submittal of previous analyses of mill sludges and waste water influent. The sampling program described in this QA Plan reflects the sampling and analyses program approved and requested by FDER.

GW

2.2 Objectives and Scope

The purpose of this sampling and analysis program is to evaluate whether the soil, sediment, or ground water have been contaminated by the discharge of process wastewater from bag manufacturing activities to the facility's wastewater treatment system. Additionally, the program is to assess whether discharge of bag plant process wastewater resulted in a violation of water quality standards and minimum criteria established in Florida Administrative Code Chapter 17-3.

The objective of this sampling and analysis program will be to evaluate the potential for the bag plant discharge to produce metal concentrations which would contaminate soils, sediment or ground water. This objective will be accomplished in the following manner:

- Representative samples of sludge will be collected from the settling basin and the sludge drying beds. The number of samples collected will be enough to ensure that a statistically significant result may be obtained. These samples will be tested for the priority pollutant metals and pH.

- Ground water samples will be collected from monitoring wells and a water supply well. These samples will be tested for specific conductivity, pH, total organic carbon (TOC) and priority pollutant metals.

Field TOC metals

This information will be used to evaluate the potential impact of contaminants in bag plant wastewater discharge on ground water quality, and on soils and sediments. A detailed description of the sampling rationale is as follows:

1. Sludge sampling: Once bag plant discharge entered the wastewater treatment system, it would have first reached the settling basin where it would be expected that most ink solids would settle. Sludges are removed from a portion of the primary settling basin and are placed into sludge drying beds. Since sludges are removed from only a portion of the settling basin, some of the sludges may still contain solids from the bag plant discharge. Thus, sludge samples will be collected from the settling basin and the sludge drying ponds.

The samples from the settling basin will be collected at locations as shown on Figure 2. The settling basin has been divided into three sections. These three sections have been chosen on the basis of inflow-outflow patterns in the basin. It would be expected that sludge particles would become finer with increasing distance from the inlet. In section A, water enters the basin, and here, the coarsest material drops out of suspension. A dredge is located in this section to remove the coarse material so that it does not block flow into the settling basin. Sections B and C were chosen to reflect trends of finer particles. Sample locations were chosen on 100' centers to reflect variations along the flow path from inlet to outlet and laterally away from the flow path of wastewater through the settling basin. The approximate locations are shown on Figure 2.

The sludge drying beds were also divided into three sections as shown on Figure 3. Again, the location of the three sections is based on the location of the drying bed inlet and outlet. Section A is closest to the inlet and Section C is closest to the outlet. Section A is closest to the inlet and Section C is closest to the outlet. Again, it is expected that variations of sludge distribution would occur with distance from the inlet and with distance from the centerline of the flow from one end of the basin to the other. Sample locations were chosen to be representative of variations within each section.

The sludge drying beds will be sampled as the sludge is removed for hauling to landfills. The sludge is removed by bulldozer and clamshell. Initially, the dike of the bed is breached near the center of one of the north-south dikes. The equipment is moved north and south from the first cut through the sludge at this breach. As the sludge is removed, cross sections of the sludge are progressively exposed. Samples will be collected at the appropriate locations on these cross sections as the sludge is removed. The location of the sampling points are shown on figure 3. The samples collected will be representative of observed changes of the sludge with depth.

The number of samples chosen is based on statistical analysis techniques presented in EPA SW-846 (July, 1982). Statistical analysis of previous metal analyses of sludge samples was conducted as outlined in EPA SW-846. Four samples from the settling basin and the sludge drying beds were assumed to be random. Using primary drinking water standards as the regulatory threshold, the number of samples to be collected was calculated. The results of these calculations indicated that a sufficient number of samples had been collected. Thus it was decided to collect a number of samples from each of three sections of the settling basin and the sludge drying beds. A composite would be made from the samples collected in each section, resulting in a total of six composite samples. Splits of the sludge samples collected at each location will be preserved for further testing if statistical analyses of the composite samples indicates that this is appropriate.

The EP Toxicity leaching procedure will be used to analyze sludge samples from both the settling basin and the sludge drying beds. The resulting leachate will be analyzed for the priority pollutant metals and pH. A statistical evaluation will be conducted for those metals for which drinking water standards have been established. For these metals, the primary drinking water standards will be used as the regulatory threshold. For those metals for which drinking water standards have not been established, a comparison will be made of sludge concentrations at the Pensacola Mill with typical metal concentrations in paper mill sludges where a bag plant is not in operation.

2. Ground water sampling: The effluent ponds would have received bag plant discharge in the past and thus could be expected to have been potential sources of contamination to ground water at the mill. Potentially there are two directions in which contaminated ground water could move. Downgradient along Eleven Mile Creek or vertically downward towards the cone of depression created by the Champion water supply wells. Thus, as described in the supplement to the PCAP, the following wells will be sampled:

Well	Purpose of Sampling
MW-1	Background water quality
MC-S6	Shallow ground water down-gradient of mill wastewater treatment area.
Champion Water Supply Well 23	Discharge towards the cone of depression

The location of these wells is presented in Figure 1. These wells will be sampled for pH, specific conductivity, TOC, and priority pollutant metals.

2.3 Schedule

Field Sampling will be scheduled in two parts at the bag manufacturing facility. The first sampling program will be performed in the dewatering basin, and the second in the sludge drying beds.

Field sampling in the dewatering basin will begin within 90 days following the approval date of the QA Plan by FDER.

Field sampling in the sludge drying beds will begin within 90 days of the start date of sludge removal work. Sludge removal from the drying beds is expected to begin during the first 6 months of 1988.

3.0 QA OBJECTIVES FOR MEASUREMENT DATA

3.1 Field Measurement

Table 3.1 summarizes precision, accuracy and completeness objectives for the field measurement parameters required in this study.

3.2 Laboratory Measurement

Information regarding precision, accuracy and completeness objectives for analytical procedures is found in Table 3.1 on pages 3.2 through 3.13 of the ES&E QA Plan. Laboratory measurements include the following priority pollutant metals (including barium and sodium) and corresponding analytical method numbers:

METALS	ANALYTICAL METHOD
Arsenic	7060
Mercury	7470
Selenium	7740
Thallium	7841
Antimony	6010
Beryllium	6010
Cadmium	6010
Chromium	6010
Copper	6010
Lead	6010
Nickel	6010
Zinc	6010
Silver	6010
Barium	6010
Sodium	6010

Extraction method 1310 will be used for sludge samples. Laboratory QA data can be found in Table 3.3 of the ESE QA Plan.

TABLE 3.1

PRECISION, ACCURACY AND COMPLETENESS OBJECTIVES FOR FIELD MEASUREMENTS AND LABORATORY ANALYSIS TO BE PERFORMED FOR THIS REPORT

MEASUREMENT PARAMETER	REFERENCE	EXPERIMENTAL CONDITIONS	PRECISION (MEAN FSD)	ACCURACY (MEAN FSD)	COMPLETENESS
Temperature (Thermometric, ^{o}C)	EPA 600/4-79-020 Method 170.1	Water	ND *	ND	98%
pH (Electrometric, Units)	Std. Method, 15th Ed., Section 423	Water	2 %	2 %	95%
Specific Conductance	EPA 600/4-79-020 Method 120.1 Standard Methods 14th Ed., Section 205	Water	4 %	2 %	95%

* Not Determined

4.1 Ground Water Sampling

Ground Water samples will be obtained from existing monitor wells and one Champion water supply well which are part of the approved ground water monitoring system for the mill. The location of these wells is presented in Figure 1.

4.1.1 Monitor Wells

Prior to sampling a monitor well, the well will be evacuated in order that a representative sample of formation fluid is obtained. The procedures for evacuating a well are as follows:

1. Three to five well casing volumes are to be evacuated. As water is produced from the well, periodic measurements of temperature, conductivity, and pH will be made. Stabilization of these parameters indicates that water is being drawn from the formation.

2. To prevent well contamination, a properly cleaned bailer or pump will be used to evacuate the well. Sampling should take place as soon as possible after evacuating the well. If sampling cannot be conducted within 24 hours, the well should be evacuated again before collecting the sample.

The following information is to be recorded on the field sampling report (Figure 4) at the time of sampling:

1. Collector's name, date and time.

2. Water level depth from top of casing before obtaining sample.

3. Reason for Sampling - e.g., semi-annual or quarterly sampling, special problems (define), initiator requesting the well sampling.

4. Sample Source - Well number, sequential sample number.

5. Sample pH, temperature, conductivity (field determination).

6. Sample Observations - Color, turbidity, odor, sediment, surface oil, etc.

7. Sample volume, containers, preservatives.

8. Test to be performed on each sample.

9. Weather conditions at the time of sampling.

10. Additional Comments or Recommendations - e.g., split samples (with whom), re-sampling, equipment failures, etc.

The following procedures are to be followed during well sampling:

1. Samples are to be containerized and preserved immediately in containers properly prepared by Environmental Science and Engineering Laboratories. A description of the preservatives added to the sample containers by the laboratory may be found in the Environmental Science and Engineering Laboratory approved QA Plan on file with the state. Two samples will be collected at each monitor well. One will be containerized and preserved for metals and the other will be containerized and preserved for total organic carbon. Each container is to be filled to the top to preserve anaerobic conditions. All samples will be sealed and refrigerated on ice along with field blanks. Temperature of water and soil samples will be maintained at approximately 4°C throughout the holding time. Sample bottle types, holding times, and preservation methods can be found in Table 4-1 of the ESE QA Plan.

2. The sample is to be sealed to maintain sample integrity. The collector is to date, sign and identify the sample on the seal and attach it to the container and lid. A weather proof adhesive seal and pen is to be used. A sample label is to be used on each sample container. The following is to be indicated on the label:

    1. Collector's name, date, and time
    2. Sample source (monitor well number)
    3. Sample number
    4. Sample preservatives
    5. Test(s) to be performed

Sample labels and seals will be provided by the laboratory.

4.1.2 Water Supply Well

Water supply wells will be sampled as close to the well head as possible. If a tank cannot be bypassed, it will be necessary to run the water 30 minutes before sampling.

The tap should be opened so that a smooth-flowing water stream at moderate pressure without splashing is obtained. Sampling techniques, described in EPA, Region IV, SOP and QAM, Section 4.8.2, will be followed. Measurements of pH, temperature, conductivity should be obtained at the time of sampling. Proper containers will be supplied and prepared by Environmental Science and Engineering Laboratory. The samples will be containerized and preserved according to the same procedures described under monitor well sampling.

4.2 Sludge Sampling

A platform on pontoons will be used to reach the specified sample locations in the primary clarifier. A sediment sampler will be used to obtain the core samples. The sampler will consist of a push rod (1-inch galvanized pipe), a brass foot valve, and replaceable sampling tubes. The foot valve is located at the top and acts to create negative pressure on the tube sample, thus keeping the sample in the tube. Sample tubes will consist of 2-inch diameter Schedule 40 PVC threaded pipe. Additional PVC can be added in 2.5 foot sections until firm material is encountered. Once the tube sample is pulled up, the bottom will be capped. The height of the sample in the tube will be measured. The excess tube at the top will be cut away, and the top will be capped. The sample tube will be cleaned and labeled and held for splitting and compositing. If it is not possible to collect a sample in the tube because the sludge is too loose, then a Ponar dredge will be used to grab a sample.

galvanized

Once the samples have been collected they will be composited. Each group of tube samples from a section will be composited. A representative portion of sludge will be taken from every one foot section of the sample in the tubes and will be mixed thoroughly with other tube samples from the same section. The mixing will take place in a stainless steel or Pyrex compositing container. Additionally, the sludge from each tube will be composited in the same manner and will be preserved for future individual sample location testing, if this becomes appropriate.

The PVC casing and compositing container and tools will be cleaned as follows:

1. Wash equipment thoroughly with laboratory detergent and hot water using a brush to remove any particulate matter or surface film.

where's the rest of it?

The tap should be opened so that a smooth-flowing water stream at moderate pressure without splashing is obtained. Sampling techniques, described in EPA, Region IV, SOP and QAM, Section 4.8.2, will be followed. Measurements of pH, temperature, conductivity should be obtained at the time of sampling. Proper containers will be supplied and prepared by Environmental Science and Engineering Laboratory. The samples will be containerized and preserved according to the same procedures described under monitor well sampling.

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Once the samples have been collected they will be composited. Each group of tube samples from a section will be composited. A representative portion of sludge will be taken from every one foot section of the sample in the tubes and will be mixed thoroughly with other tube samples from the same section. The mixing will take place in a stainless steel or Pyrex compositing container. Additionally, the sludge from each tube will be composited in the same manner and will be preserved for future individual sample location testing, if this becomes appropriate.

The PVC casing and compositing container and tools will be cleaned as follows:

1. Wash equipment thoroughly with laboratory detergent and hot water using a brush to remove any particulate matter or surface film.

5.0 SAMPLE CUSTODY

5.1 Field Sampling

Proper chain of custody (COC) records are necessary for all samples (Figure 4). This is required to provide the documentation and control necessary to identify and track a sample from collection to analysis. Once collected, each change of possession must be documented on the COC records until after the laboratory actually receives the sample. The following steps should be followed:

1. A chain of custody record is to be completed for each sample. These are to be filled out by the collector and with each change of possession.

2. A copy of the completed chain of custody record is to be retained by the collector. The original accompanies the sample to the laboratory which performs the analyses.

3. Upon receipt of the sample, the laboratory manager or his representative, is to complete the chain of custody record, make a copy for his files, and return the original with the analytical data to the initiator.

If samples are shipped by common carrier some type of seal should be used over the container caps and shipping container.

5.2 Laboratory Operations

Chain of custody procedures for laboratory operations are found in Section 5 of the FDER approved QA Plan prepared by Environmental Science and Engineering Laboratories.

6.0 CALIBRATION PROCEDURES AND FREQUENCIES

6.1 Field Equipment

Field monitoring equipment including pH, Temp meter and conductivity meter will be calibrated each day prior to use. Each meter will be calibrated periodically throughout the day. A record of each calibration event will be recorded in a bound calibration log book kept with each instrument. Calibration of pH and conductivity meters will follow the procedures specified in EPA, Region IV, SOP and QAM, Chapter IV, pages 4 and 5.

6.2 Laboratory Equipment

A description of laboratory calibration procedures for trace metals is contained in Section 6.2.3, page 6-10 of the FDER approved QA plan prepared by Environmental Science and Engineering Laboratories, Inc.

CANNOT FIND this info is in Section 6.3.2 pH 6.3.1 6.3.4 6.3.5 Region IV SOP QAM Apr 1, 86

7.0 ANALYTICAL PROCEDURES

A description of the analytical procedures to be used are provided by Environmental Science and Engineering Laboratories in Section 7 of their QA Plan. The laboratory procedures to identify priority pollutant metals are in accordance with the following analytical method numbers:

METALS	ANALYTICAL METHOD
Arsenic	7060
Mercury	7470
Selenium	7740
Thallium	7841
Antimony	6010
Beryllium	6010
Cadmium	6010
Chromium	6010
Copper	6010
Lead	6010
Nickel	6010
Zinc	6010
Silver	6010
Barium	6010
Sodium	6010

Extraction method 1310 will be used for sludge samples. Laboratory QA data can be found in Table 3.3 of the ESE QA Plan.

8.0 DATA REDUCTION, VALIDATION AND REPORTING

Information pertinent to this section can be found in Section 8.2.3, page 8-12 of the FDER approved QA Plan prepared by Environmental Science and Engineering Laboratories.

9.0 INTERNAL QUALITY CONTROL CHECKS AND FREQUENCY

9.1 Field Operations

Many of the quality control procedures that will be adhered to by Law Engineering and Champion have been discussed previously. A summary of quality control measures that will be practiced in the field include:

1. Adherence to all DER and EPA sampling procedures;
2. Frequent and proper calibration of all field analytical equipment;
3. Proper cleaning and decontamination of all sampling equipment;
4. Maintenance of sample chain of custody;
5. Use of sampling containers and kits prepared by Environmental Science and Engineering Labs;
6. Maintenance of detailed and complete field sampling records;
7. Use of sample duplicates and field blanks.

9.2 Laboratory Operations

An explanation of laboratory quality control can be found in Section 9.4, page 9-6 of the FDER approved QA Plan prepared by Environmental Science and Engineering Laboratories.

10.0 PERFORMANCE AND SYSTEM AUDITS

See Section 10.0, page 10-1 of the FDER approved QA Plan prepared by Environmental Science and Engineering Laboratories. The FDER may perform system audits if deemed necessary.

11.0 PREVENTIVE MAINTENANCE PROCEDURES AND SCHEDULES

11.1 Field Operations

A maintenance description and schedule for all field instruments follows:

	Schedule	Description
pH meter	Each use and periodically	Verify that batteries are adequate, replace if necessary.
pH electrodes	Each use	Rinse in deionized water replace plug to prevent drying.
	Periodically	Clean in mild acid or alcohol solution.
Conductivity	Each use and periodically	Rinse in deionized water meter and maintain probe in distilled water. Verify that batteries are adequate and replace if necessary.

11.2 Laboratory Operations

See Section 11.8, page 11-3 and Section 11.9, page 11-4 of the FDER approved QA Plan prepared by Environmental Science and Engineering Laboratories for a description of laboratory equipment maintenance.

12.0 SPECIFIC ROUTINE PROCEDURES USED TO ASSESS DATA PRECISION, ACCURACY AND COMPLETENESS

See Section 12.0, page 12-1 of the FDER approved QA Plan prepared by Environmental Science and Engineering Laboratories.

13.0 CORRECTIVE ACTION

Information pertaining to this subject can be found in section 13 of the accompanying QA Plan supplied by Environmental Science and Engineering. Any corrective action deemed necessary by FDER will be taken.

14.0 QUALITY ASSURANCE REPORTS TO MANAGEMENT

See Section 14 of the FDER approved QA Plan for Environmental Science and Engineering Laboratories. A QA Report summarizing the QA data submitted to Law Engineering and Champion by Environmental Science and Engineering Laboratories will be submitted to DER at project completion.

15.0 PERSONNEL QUALIFICATIONS, RESUMES

This section contains appropriate Champion and Law Engineering personnel resumes. See Section 15 of the FDER approved QA Plan for Environmental Science and Engineering Laboratories for Laboratory personnel resumes.

RESUME DAVID T. ARCENEAUX

EDUCATION: B.S. Louisiana State University (New Orleans) 1970
Major: Chemistry Minor: Math

M.S. Northwestern Louisiana State University 1972
Major: Analytical Chemistry

EMPLOYMENT HISTORY

1973-1975 Analytical Chemist - International Paper, Texarkana, Texas. Responsible for special analytical testing and laboratory quality control.

1975-1980 Environmental Lab Supervisor - Champion, Pasadena, Texas. Responsible for all environmental testing including air compliance testing and wastewater testing.

1980-1985 Environmental Control Supervisor - Champion, Pasadena, Texas. Responsible for all environmental activities and compliance.

1985-Present Environmental Control Supervisor - Champion, Pensacola, Florida. Involved in the design of the Pensacola Conversion Project, and responsible for all environmental compliance.

RESUME HOWARD JOHN HALL

EDUCATION: B.S. University of Alabama (Huntsville) 1978
Major: Chemistry/Math

M.B.A. Alabama A&M University (Normal) in progress

EMPLOYMENT HISTORY

1978-1981 Technician - Champion, Courtland, Alabama. Analytical testing, environmental compliance testing.

1981-1984 Technologist - Champion, Courtland, Alabama. Involved in air related environmental projects.

1984-1986 Process Engineer - Champion, Courtland, Alabama. Responsible for Environmental projects in air and water.

1986-Present Supervisor - Testing and Analytical Services, Champion, Pensacola, Florida. Responsible for all analytical testing, quality assurance, and data management for the mill.

RESUME JAMES N. ROCKWELL

EDUCATION: B.S. University of Alabama, 1950
Major: Chemistry Minor: Physics and Math

M.S. University of Alabama, 1951
Major: Organic Chemistry

EMPLOYMENT HISTORY

1951-1963 Organic Chemistry - Newport Corp.

1963-1969 Analytical Chemist - Newport Division of Tenneco Corp. Involved in sampling and analysis of plant wastewater for standard testing and special discharge compounds.

1969-1986 Senior Staff Analytical Chemist - St. Regis/ Champion. Corporate staff analytical chemist involved in analysis of standard wastewater parameters as well as special instrumental analysis.

1986-Present Chief Chemist - Champion Pensacola Mill. Responsible for instrumental and standard testing including method development.

ADDITIONAL TRAINING AND SPECIAL PROJECTS

1969-1976 EPA Grant - Team analytical chemist for activated carbon and lime tertiary treatment of pulp and paper mill wastewater. Set-up and supervised all wastewater testing for this project.

1980 Short Course - Fist University - OSHA Compliance Testing and Environmental Surveillance.

RICHARD A. PEARCE, P.E.
Chief Engineer

EDUCATION: M.S. in Civil Engineering
University of Arkansas - 1974

B.S. in Mathematics - 1968
Quachita Baptist University

PROFESSIONAL MEMBERSHIP: American Society of Civil Engineers

International Society of Soil Mechanics and Foundation Engineers

National Society of Professional Engineers

PROFESSIONAL REGISTRATION: Professional Engineer in Texas and North Carolina

CAREER SUMMARY

Mr. Pearce is a senior geotechnical engineer serving as a project manager and chief engineer of the Houston branch. His responsibilities include management of large multidisciplinary projects for lignite mining, waste management and heavy civil construction. Mr. Pearce is responsible for the monitoring and control of the company Hazardous Waste Program and the Quality Assurance Program in his role as chief engineer.

HAZARDOUS WASTE INDUSTRY EXPERIENCE

Mr. Pearce has directed technically complex projects for clients ranging from dewatering and slope stability of 40,000 acre lignite mines to small acre ponds that are leaking. Close personnel involvement and carefully planned data gathering has allowed Mr. Pearce to solve client's problems over the past 10 years. In the hazardous waste field, Mr. Pearce has directed projects which required preparing hydrogeologic assessments, design drawings for leachate collection systems, analysis of slope stability and ground-water impacts on constructability of projects, slurry wall design drawings and plans for remedial site actions.

Mr. Pearce is also experienced with field sampling and testing methods to include geophysical logging of boreholes, monitoring well installation, surface geophysical logging, pumping tests and water quality testing.

APPLICABLE PUBLICATIONS

"Ultimate Pile Bearing Capacity from Conventional and Quick Pile Load Tests" Master of Science Thesis

"Load Testing of a Drilled Pier in Very Stiff Beaumont Clay" presented at 1980 Specialty Conference, ASCE, Geotechnical Division, Atlanta, Georgia

"Guidelines for Design of Flexible Pavements Using Mirafi Woven Stabilization Fabrics," prepared for Celanese Fibers Company, 1981.

REPRESENTATIVE PROJECTS

Lower Colorado River Authority, Cummings Creek Mine, 1984-85
Title: Project Manager
Responsibilities: Geotechnical consulting, geologic modeling for mine to determine dewatering requirements for spoil, shear and highwall stability. Analyzed highwalls, endwalls and spoil under varying hydrostatic conditions, performed probabilistic analysis of highwalls. Performed statistical analysis of all geotechnical parameters developed during field and laboratory evaluations.

Northwestern Resources Company, Jewett, Texas, 1984
Title: Project Manager
Responsibilities: Served as geotechnical consultant to determine allowable highwall angles, dewatering requirements, spoil swell, spoil stability, dragline setback, trafficability and floor stability. Also modeled the site geologically to provide framework for geotechnical and hydrologic field work. Supervised all field and laboratory testing.

Conoco, Hazardous Waste Landfill, Lake Charles, Louisiana - 1980
Title: Senior Geotechnical Engineer
Responsibilities: Manager for ground water, geologic and geotechnical studies for 30-acre landfill site placed 50 feet below ground. Information provided was to be included as hydrogeologic report to permitting agency. Field work included soil test borings, in place permeability testing and Type II piezometer installation.

Landfill Facility, Champion International, Quinnesec, Michigan, 1984
Title: Project Manager
Responsibilities: Performed a hydrogeologic study including field well monitoring, and aquifer characterization to include background water quality testing. Prepared successfully approved permit application to Michigan DNR. Provided design drawings for synthetic liner system, leachate collection system and groundwater monitoring system.

Hydrogeologic Site Assessment, Conoco, Chocolate Bayou, Texas, 1982
Title: Project Manager
Responsibilities: Performed a Hydrogeologfic site assessment of petro chemical plant facility. Work included the installation of monitoring wells, water quality testing and evaluation of the impact of surface facilities on the ground water quality. Additional studies included evaluation of stability of scrubber sludges and methods of stabilizing the material for future land use.

Great Northern Nekoosa, Leaf River Project, New Augusta, MS 1983
Title: Senior Geotechnical Engineer
Responsibilities: Direction of technical effort for grass roots pulp mill in Coastal plain tertiary sediments. Work included, deep foundation recommendations, large mat settlement, prediction pulper pit excavations, pavement design construction, site development recommendations and field consulting and recommendations for waste management facilities.

Site Remedial Action Design, Alcoa, Rockdale, Texas
Title: Senior Geotechnical Engineer
Responsibilities: Provided remedial solution to recover, encapsulate existing uncontrolled site. Prepared plans and cost estimates for cleanup operation. Represented client with TDWR in meetings.

Ground-Water Assessment, Conoco, Ponca City, Oklahoma, 1984
Title: Project Manager
Responsibilities: Coordinated data collection, field program for ground-water assessment at an existing refinery. Twenty-two monitoring wells with existing soil test borings were utilized in the study. Work included meetings with ODOH regulators and assistance in the part B application.

Conceptual Closure Design, Crown Zellerbach, Urania, Louisiana, 1985
Title: Senior Engineer
Responsibilities: Provided conceptual design drawings, cost estimates and report for closure of a hazardous waste impoundment and on on-site vault. Work included analysis of volume of liquid and semi-solid wastes, stabilization of the wastes and placement in a RCRA landfill.

KYLE WILLIAM WAGONER
Staff Geological Engineer

EDUCATION: B.S. Geological Engineering
Michigan Technological University

Undergraduate, Industrial Education
Western Michigan University

PROFESSIONAL MEMBERSHIP: Society of Petroleum Engineers/A.I.M.E.
(Junior Member)

CAREER SUMMARY

Integrated Drilling & Logging, Inc., Houston, Texas. Held the position of logging geologist for on and offshore drilling projects. Utilized electric, porosity, and gas logs along with sample cuttings to evaluate lithology, pore pressure, and hydrocarbon/water saturation.

Texasgulf Chemicals, Inc., Granger, Wyoming. Held the position of rock mechanics engineering co-op in a room and pillar soda ash mine. Responsibilities included: the installation and utilization of rock stress and deformation instrumentation; monitored escapeway safety conditions and roof support systems; performed a study of the rock mechanics of high extraction room and pillar mining.

Law Engineering Testing Company, Houston, Texas, Staff Engineer. Major responsibilities have included the coordination and execution of geotechnical and hydrogeological projects with emphasis on mining, pulp and paper mill, chemical, energy and construction industries.

EXPERIENCE SUMMARY

Cummins Creek Lignite Mine, Lower Colorado River Authority, La Grange, Texas
Title: Staff Geologist
Responsibilities: Interpretation, correlation and data tabulation of exploration borehole geophysical logs.

Landfill Facility, Champion International, Quinnesec, Michigan
Title Staff Geological Engineer
Responsibilities: Field coordination of a ground-water monitoring well installation program at the landfill site. Work included water quality testing and suitable relocation of problem wells.

Brine Pond Facility, Cities Service Incorporated, Hackberry, Louisiana
Title: Staff Engineer
Responsibilities: Field coordination of ground water monitoring well installation. Work included water quality sampling and an investigative soil test boring through a brine pond clay liner.

Proposed Site for Waste Water Pond, Phillips Petroleum Echo Plant, Orange, Texas
Title: Staff Geologist
Responsibilities: Performed a field geotechnical investigation at the proposed pond site. Work included excavating soil test pits and auger holes to make subsurface interpretations of ground water levels, soils identification for possible use as construction material, and site accessibility.

Petroleum Refinery, Conoco, Ponca City, Oklahoma
Title: Staff Engineer
Responsibilities: Implementation of a ground-water monitoring well development program, including water quality testing.

Rosemeade Addition Apartments, Tonetti Construction Company, Dallas, Texas
Title: Staff Geologist
Responsibilities: Geotechnical investigation of fill material at an old limestone quarry now being utilized as a residential construction site. Work included excavating test pits for subsurface material identification, field penetrometer and shear testing of fill material, and determining the potential for structural damage due to excessive fill settlement.

ERIK EDWARD HANSEN

EDUCATION:

Post Baccalaureate/Environmental Engineering
University of Houston
Ground Water Hydrology and Hazardous Waste Management

B.S. Geological Engineering
Colorado School of Mines
Engineer-in-Training Certificate

PREVIOUS WORK SUMMARY

PERMANENT:

TEXAS STATE DEPARTMENT OF HIGHWAYS & PUBLIC TRANSPORTATION, HOUSTON, TEXAS
Planning Engineer
Reviewed and implemented proposed highway plans. Monitored and assisted consultant engineering, design operations and project planning. Was active in public involvement, environmental affairs and dealt with various government agencies.

PART TIME WHILE IN COLLEGE:

COLORADO SCHOOL OF MINES, Geology Department, Golden, Colorado
Work-Study Assistant
Assisted professors in Petroleum Geology Design Course. Logged cores and assisted in carbonate research.

GEODATA CORPORATION, Denver, Colorado
Seismic Technician
Dealt with brokerage and search of seismic data.

ROCKY MOUNTAIN ENERGY, Broomfield, Colorado
(Subsidiary of Union Pacific)
Geotechnical Clerk
Reviewed and helped implement a filing system for most RME projects. Learned about operations related to the geology and mining of coal, uranium and trona.

ELMORE OILFIELD CONSTRUCTION, Lindsay, Oklahoma
Roustabout
Learned about and worked with many aspects of oil & gas production. Maintained and built production sites, pipelines and gas plants.

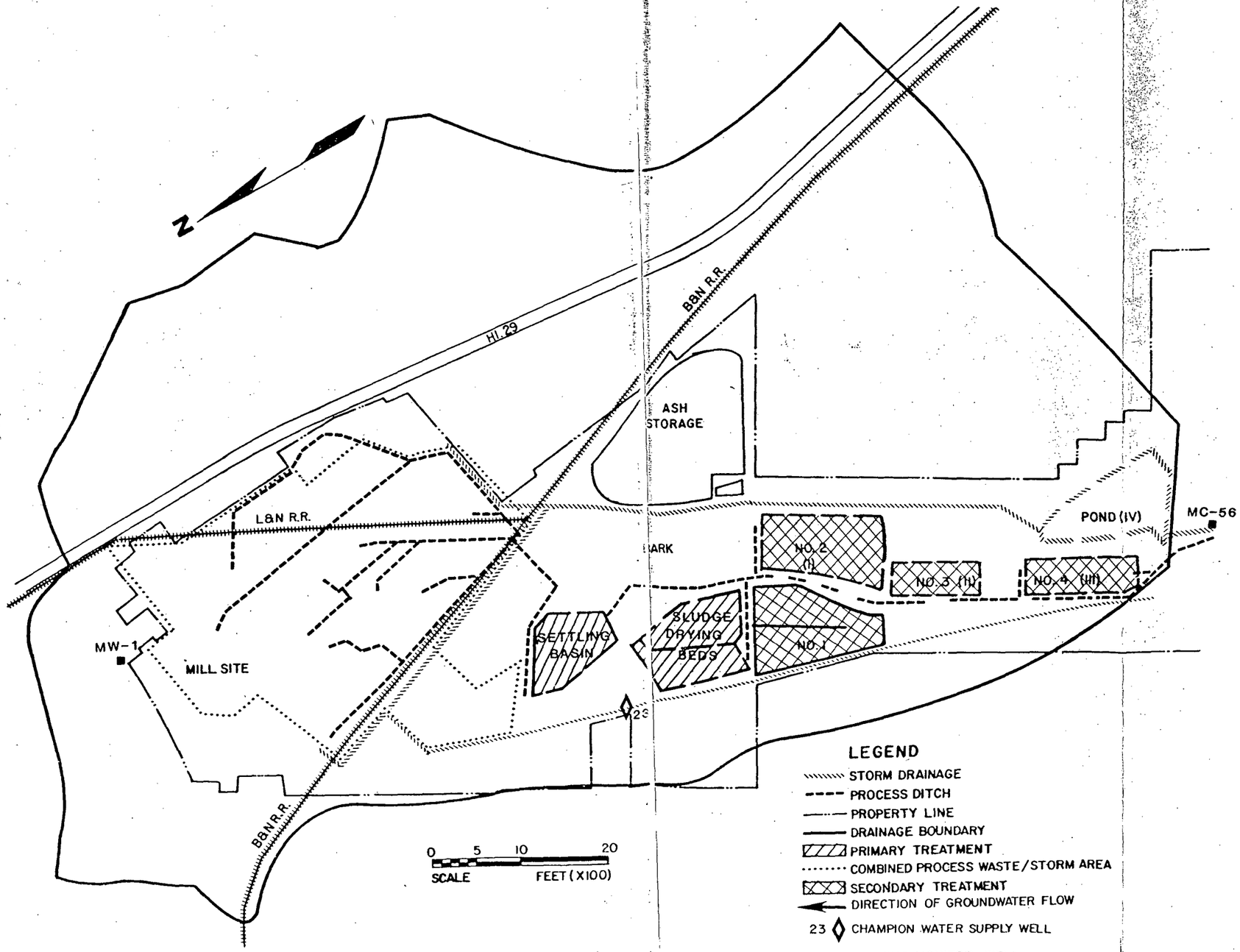


FIGURE 1
SITE LOCATION MAP

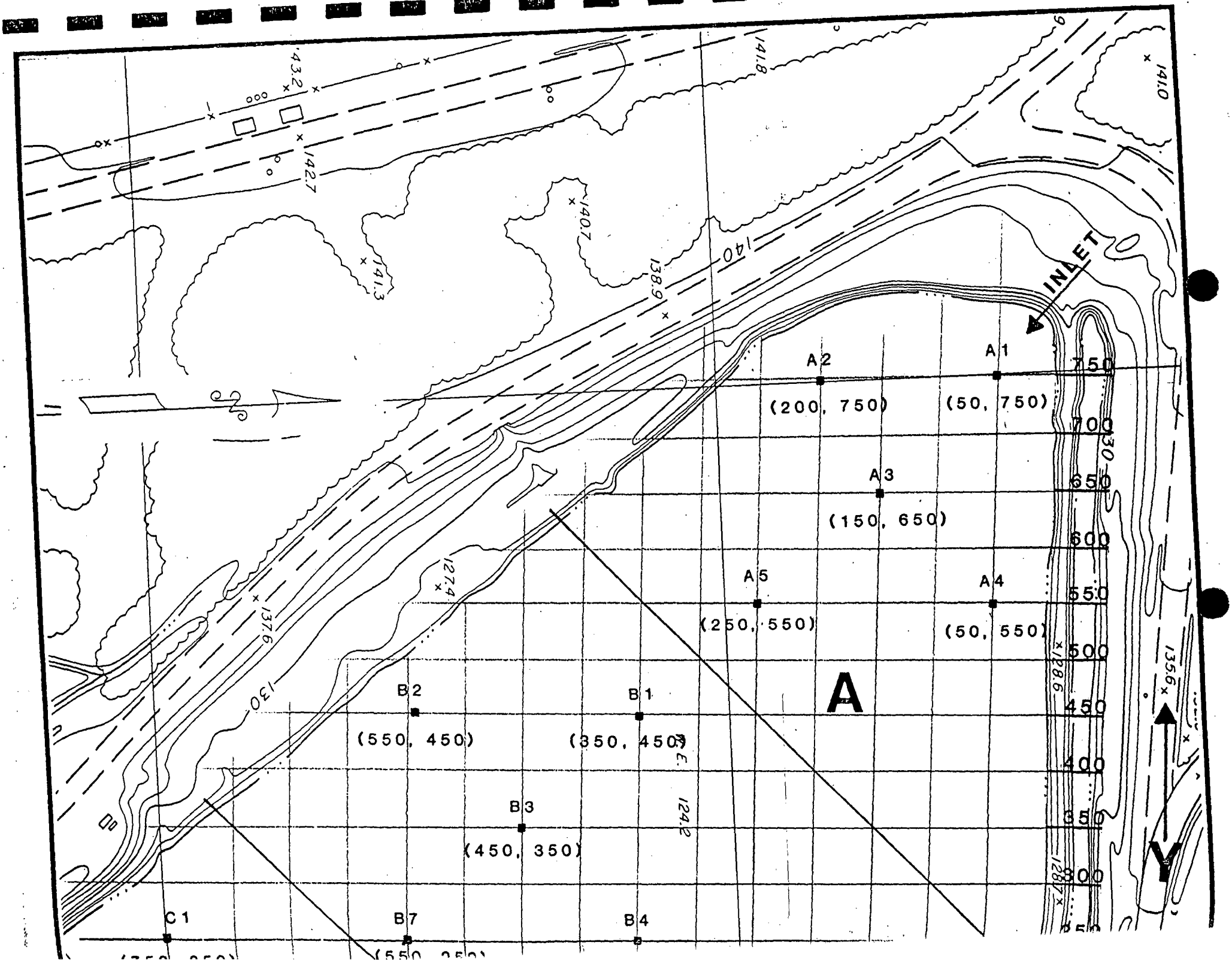
LAW ENGINEERING PROJECT HT-1671-86W

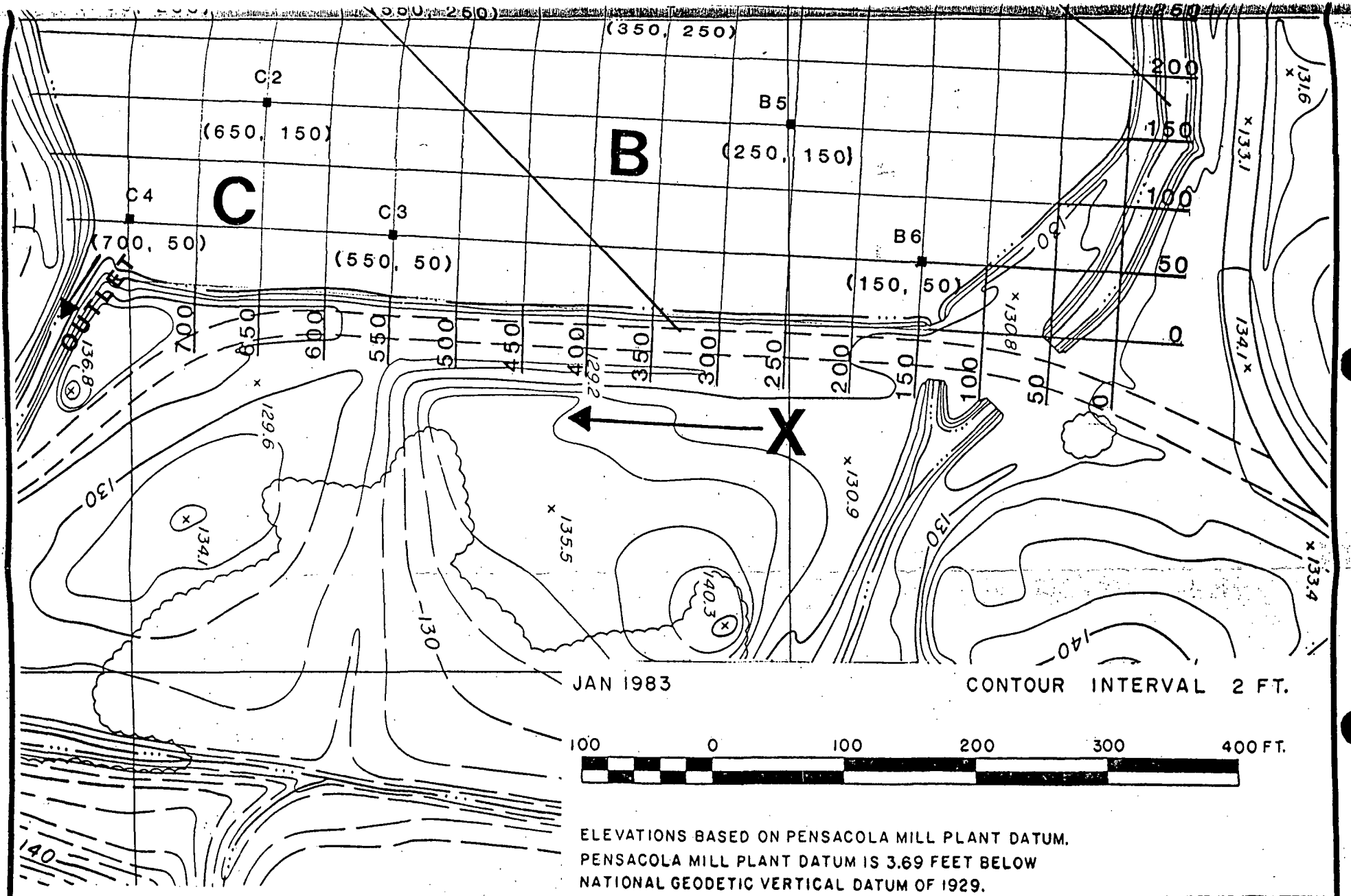
LAW ENGINEERING TESTING COMPANY

HOUSTON, TEXAS

QA PLAN
CONTAMINATION ASSESSMENT PLAN
Bag Manufacturing Facility

CHAMPION INTERNATIONAL CORPORATION
PENSACOLA FACILITY, FLORIDA


INLET
A1
A2
A3
A4
A5
(50, 750)
(200, 750)
(150, 650)
(50, 550)
(250, 550)
A
B1
B2
B3
B4
B7
(350, 450)
(550, 450)
(450, 350)
C1
750
700
650
600
550
500
450
400
350
300
141.8
141.0
143.2
142.7
140.7
141.3
138.9
140
137.6
127.4
130
135.6
128.6
124.2



QA PLAN
CONTAMINATION ASSESSMENT PLAN
Bag Manufacturing Facility

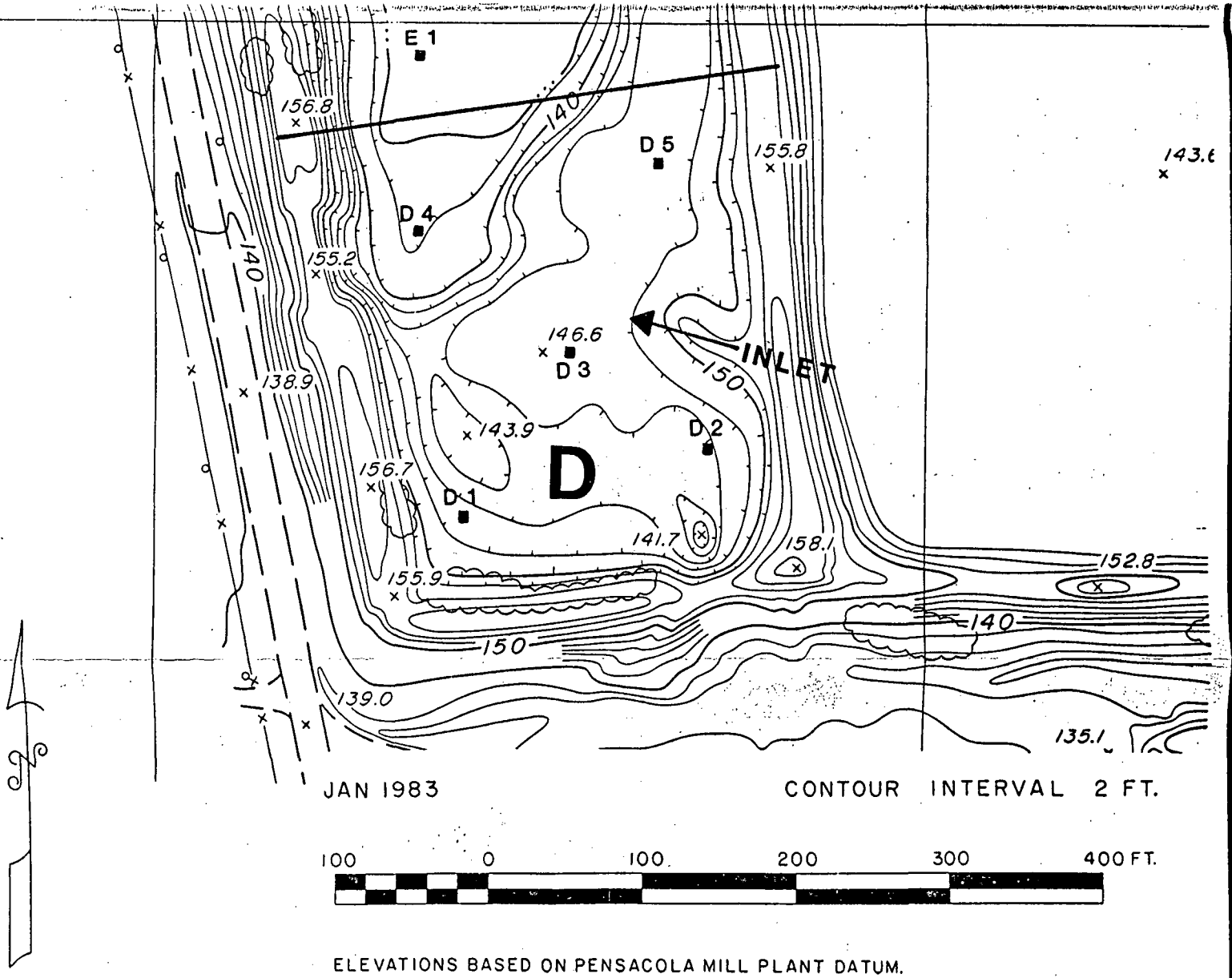
CHAMPION INTERNATIONAL CORPORATION
PENSACOLA FACILITY, FLORIDA

LAW ENGINEERING TESTING COMPANY

HOUSTON, TEXAS

FIGURE 2
LOCATION OF SAMPLING POINTS
SETTLING BASIN

LAW ENGINEERING PROJECT HT-1671-86W



ELEVATIONS BASED ON PENSACOLA MILL PLANT DATUM.
PENSACOLA MILL PLANT DATUM IS 3.69 FEET BELOW
NATIONAL GEODETIC VERTICAL DATUM OF 1929.

QA PLAN
CONTAMINATION ASSESSMENT PLAN
Bag Manufacturing Facility

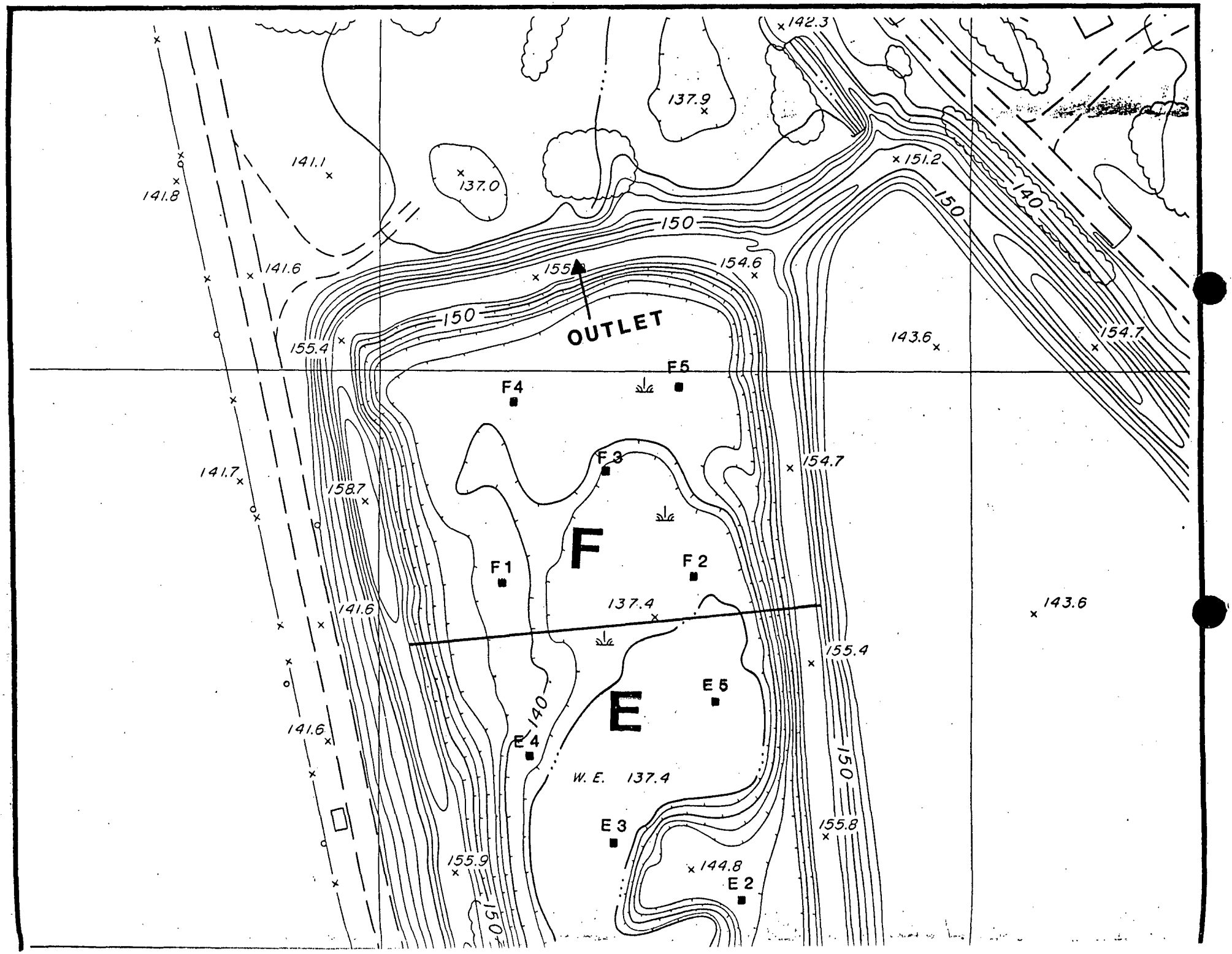
CHAMPION INTERNATIONAL CORPORATION
PENSACOLA FACILITY, FLORIDA

LAW ENGINEERING TESTING COMPANY

HOUSTON, TEXAS

FIGURE 3
LOCATION OF SAMPLING POINTS
SLUDGE DRYING BEDS

LAW ENGINEERING PROJECT HT-1671-86W


142.3
137.9
141.1
137.0
141.8
151.2
150
140
141.6
154.6
155.4
OUTLET
143.6
154.7
F5
F4
F3
141.7
158.7
154.7
F
F1
F2
137.4
141.6
143.6
155.4
E5
E
140
E4
141.6
W. E. 137.4
150
E3
155.8
155.9
144.8
E2
150

FIELD SAMPLING REPORT

LAW ENGINEERING
HOUSTON, TX

JOB NO. _____
NAME _____
DATE _____ TIME _____
SAMPLING POINT(LOCATION) _____

SAMPLE INFORMATION

SAMPLE I.D. NO.: _____

MATERIAL: _____ WATER _____ SOIL _____ SLUDGE _____ OTHER (LIST) _____

TYPE: _____ GRAB _____ COMPOSITE _____ OTHER (LIST) _____

HAZARDOUS ?: _____ YES _____ NO _____ UNKNOWN

CONTAINER		NUMBER	PRESERVATIVE/ PREPARATION	COMMENTS
TYPE	VOLUME			

COMMENTS: (WELL PURGING VOLUME; SAMPLE APPEARANCE; ODOR; COLOR, ETC.)

LABORATORY RECEIPT: DATE/TIME _____ CONDITION _____

FIELD MEASUREMENTS

SAMPLES COLLECTED BY: _____

PARAMETER	EQUIPMENT I.D.	RESULTS (UNITS)	COMMENTS

COMMENTS: (CALIBRATIONS, FIELD MODIFICATIONS, INSTRUMENT PROBLEMS)

GENERAL INFORMATION

WEATHER _____ AIR TEMP. _____

SAMPLES SHIPPED TO: _____

SPECIAL HANDLING: _____

MODE OF SHIPMENT: _____ CAR/TRUCK _____ BUS _____ PLANE _____ COMMER. VEH.

4/8/88 REV. 0

FIGURE 4 FIELD SAMPLING REPORT FORM

FIGURE 5

CHAIN OF CUSTODY RECORD

PROJECT NAME AND NUMBER:	SAMPLERS: (Signature)

SAMPLE NUMBER	SAMPLE LOCATION	DATE	TIME	SAMPLE TYPE			SEQ. NO.	NO. OF CONTAINERS	ANALYSIS REQUIRED
				Water		Air			
				Comp.	Grab				

Relinquished by: (Signature)	Received by: (Signature)	CONDITION:	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	CONDITION:	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	CONDITION:	Date/Time
Relinquished by: (Signature)	Received for Laboratory by: (Signature)	CONDITION:	Date/Time

Method of Shipment:

Bill

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT
160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5794

February 22, 1988

Mr. David T. Arceneaux
Supervisor Environmental Control
Champion International
P.O. Box 87
Cantonment, FL 32533-0087

Dear Mr. Arceneaux:

We have received the QAPP for the Champion International Corporation facility in Cantonment, FL.

A preliminary review of the QAPP indicates that it is complete. As such, we have forwarded this document to our QA Section in Tallahassee for review of the technical content. Completing this, you will be advised accordingly. You are advised not to initiate the CAP until the QAPP has been approved.

Your continued cooperation in complying with this matter is greatly appreciated. If you should have any questions please feel free to contact Mr. Charles Goddard of this office at (904) 436-8320.

Sincerely,

Robert V. Kriegel
District Manager

RVK:cga

ORIN.

QUALITY ASSURANCE PROJECT PLAN TRANSMITTAL FORM (FDER Internal Use Only)

- ☐ P-CAP
- ☐ Direct Contract
- ☐ Shared Contract
- ☐ Permit Related
- ☑ CAP, RI/FS
- ☐ Generic Plan
- ☐ Inhouse Project
- ☑ Enforcement Related
- ☐ Other QA Plan For Contamination Assessment Plan

TITLE: Champion International Corporation

DISTRICT OFFICE: Northwest District

PROJECT COUNTY: Escambia

REVISION NO: 4

COMPANY PREPARED BY: LAW Engineering Testing Company

COMPANY PREPARED FOR: Champion Int.

DATE RECEIVED IN DISTRICT: 2/19/88

DATE FORWARDED TO TALLAHASSEE: 2/22/88

DISTRICT OFFICE COORDINATOR: Bill Kellenberger. Bill Kellenberger

WERE THE FOLLOWING ELEMENTS PROVIDED

	YES	NO			YES	NO	
1.	☑	☐	Title & Signature	10.	☑	☐	Data Reduction
2.	☑	☐	Table of Contents	11.	☑	☐	Internal QA Checks
3.	☑	☐	Project Description	12	☑	☐	Systems Audits
4.	☑	☐	Organization	13.	☑	☐	Maintenance
5.	☑	☐	QA Objectives Table	14.	☑	☐	Assess Data
6.	☑	☐	Sampling Procedures	15.	☑	☐	Corrective Action
7.	☑	☐	Sample Chain of Custody	16.	☑	☐	QA Reports
8.	☑	☐	Calibration & Frequency	17.	☐	☐	Resumes
9.	☑	☐	Analytical Procedures				

If any boxes are checked "NO", return to preparer with instructions to complete. Date returned: _____.

PERM Form 86-5

Cover pages only filed see 3/9/88 memo from Q.A.

375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

Champion
Champion International Corporation

February 17, 1988

Mr. Robert V. Kriegel
Florida Department of Environmental Regulation
160 Governmental Center
Pensacola, Florida 32501

Dear Mr. Kriegel:

Attached is the revised Quality Assurance Plan for the sampling of sludge and groundwater at the Pensacola Mill. This plan is being submitted as required by Paragraph 4 of Exhibit 3 of Consent Order 85-0619.

If there are any questions concerning this revised plan, please call.

Sincerely,

David T. Arceneaux
Supervisor
Environmental Control

DTA/ma
Attachment

cc: Richard Pearce (Letter only)
Law Engineering

LAW ENGINEERING

GEOTECHNICAL, ENVIRONMENTAL
& CONSTRUCTION MATERIALS
CONSULTANTS

October 16, 1987

Champion International Corporation
P. O. Box 87
Cantonment, Florida 32533-0087

ATTENTION: Mr. David T. Arceneaux

SUBJECT: **REVISED QUALITY ASSURANCE PLAN FOR CONTAMINATION ASSESSMENT PLAN**
Bag Manufacturing Facility, Florida
LAW ENGINEERING PROJECT NO. HT-1671-86W

Dear Mr. Arceneaux:

Law Engineering is pleased to submit this revised QA Plan for the Contamination Assessment Plan at the Champion Bag Plant in Cantonment, Florida. The revisions address the FDER review comments submitted to you by the Department on January 29, 1987. Information to address the comments was obtained from Ms. Jackie Hargrove of Environmental Science & Engineering Laboratories in Gainesville, Florida and yourself.

As always we appreciate the opportunity to serve you and look forward to continuing as your environmental consultant in the future. If you have any questions or comments regarding the QA Plan revisions, please do not hesitate to call.

Very truly yours,

LAW ENGINEERING

Kyle W. Wagoner
Geological Engineer

Owen D. Sveter
Senior Hydrogeologist

REGISTERED GEOLOGIST
CERTIFICATE NO.
15936
OWEN D.
SVETER
Date Signed 10/16/87
ARIZONA, U.S.A.

Richard A. Pearce, P.E.
Chief Engineer

KWW/ODS/cg
840chclr

PARK CENTRAL I, SUITE 222
7616 LBJ FREEWAY
DALLAS, TX 75251
214-934-0800

5500 GUHN ROAD
HOUSTON, TX 77040
713-939-7161

QA PLAN

FOR

CONTAMINATION ASSESSMENT PLAN

Bag Manufacturing Facility

David O. Hearn — Respondent — 1/11/88 — Date

Project Director Manager — 12/22/87 — Date

H. John Hall — QA Officer — 2/17/88 — Date

Price

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT
160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5794

January 29, 1987

Mr. David T. Arceneaux
Superintendent, Environmental Control
Champion International Corporation
Post Office Box 87
Cantonment, Florida 32533-0087

Dear Mr. Arceneaux:

We have completed review of the Quality Assurance Plan prepared by Law Engineering as part of the Preliminary Contamination Assessment Plan (PCAP) required by the Consent Order entered into between Champion International and the Department on October 31, 1985. We are forwarding comments along with an annotated copy of your QA Plan. The revised document, addressing their comments and the needed corrections, must be resubmitted and approved before the PCAP may proceed.

If you have any questions regarding these comments or the QA Plan in general, contact John Labie at 904-487-0505.

Sincerely,

Thomas W. Moody

Thomas W. Moody, P.E.
Special Programs Supervisor

TWM/rsk

Enclosures

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE
To: B. Kellenberger Pensacola
To:
To:
From: Date:

RECEIVED
JAN 15 1987
BUREAU OF OPERATIONS

TO: Mr. John Gentry, Professional Engineer
Bureau of Operations

THROUGH: Ms. Carolyn S. Lewis, QA Officer
Water Quality Assessment and Quality Assurance Section

FROM: John G. Labie, Environmental Supervisor
Water Quality Assessment and Quality Assurance Section

DATE: January 12, 1987

SUBJECT: Quality Assurance Review; 86213C Champion International Corporation, Bag Manufacturing Facility, Florida, Revision No. 0; Submitted by Law Engineering Testing Company

We have reviewed the subject document and are returning to you our comments in the form of the attached review sheets and one annotated copy of the QA plan. The revised document, addressing our comments and needed corrections, must be resubmitted and approved before project initiation.

If you have any questions concerning this matter, please let me know so that we may assist you.

JGL/sps

Attachments (2): annotated copy of QAPP
QAPP review sheets

cc: Ms. Roxane Dow (w/o attachments)
Dr. Carlos Boueres (w/o attachments)
Mr. Bill Kellenberger, NW District - Pensacola (w/o attachments)

RECEIVED
JAN 21 1987
NORTHWEST FLORIDA DER

Quality Assurance
Bureau of Water Quality Management
(Form 1-84)

REVIEW OF QA PROJECT PLAN

Title 86213C Champion International Corporation, Bag Manufacturing Facility, Florida, Revision No. 0

Prepared by Law Engineering Testing Company

Reviewed by John G. Labie

Review date January 12, 1986

Review

1. Title and DER approval page

   O.K.

2. Table of contents

   O.K.

3. Project description

   O.K.

4. Project organization and responsibility

Should have a chart or diagram showing line of authority.
Reference section and page number of E.S. & E. Generic Plan.

5. QA targets for precision and accuracy of data

Identify each metal and the method reference number selected to do the analysis. Reference section and page number where the QA data can be located in E.S.& E. Generic QA Plan.

6. Sampling procedures

Section 4, Page 4-2 - Water supply wells should be sampled as close to the well head as possible. If a tank cannot be bypassed, it will be necessary to run the water 30 minutes before sampling. Reference E.S. & E. Generic Plan for bottle types, holding times, and preservation.

7. Sample chain of custody

If samples are shipped by common carrier some type of seal should be used over the container caps and shipping container.

8. Calibration procedures and frequency

O.K. but should reference section and page number.

9. Analytical procedures

See #5 above.

10. Data reduction, validation and reporting

    See additional comments.

11. Internal QC checks and frequency

    See additional comments.

12. Performance and systems audits and frequency

    A. Include a statement that FDER may perform audits if deemed necessary.

    B. See additional comments.

13. Preventive maintenance procedures and schedules

    See additional comments.

14. Specific routine procedures to assess precision, accuracy, and completeness of data

    See additional comments.

15. Corrective action

    Include a statement that any corrective action will be taken that is deemed necessary by FDER.

16. QA reports to management

O.K. assuming the project will take less than three months to complete.

17. Qualifications of Project Personnel

O.K.

Additional comments:

References to Generic E.S.& E. QA Plan needs to be to specific section and page numbers.

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT
160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5794

December 30, 1986

Mr. David T. Arceneaux
Superintendent, Environmental Control
Champion International Corporation
P. O. Box 87
Cantonment, Florida 32533-0087

Dear Mr. Arceneaux:

We have completed our initial review of the QA Plan for the Champion facility which was submitted to our office on November 26. This document has been forwarded to our QA/QC Section in Tallahassee for further review and comment. Completing this, you will be advised accordingly.

If you should have any questions, please feel free to contact Mr. Charles Goddard of this office at 436-8320.

Sincerely,

for George E. Hoffman, Jr.
District Enforcement Officer

GEH:cgd

375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32[redacted]-0087
904 968-2121

Champion
Champion International Corporation

Sent to Tracy
29 Dec 86
dj

November 21, 1986

Mr. Robert V. Kriegel
District Manager
State of Florida
Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Dear Mr. Kriegel:

Attached are two copies of the Quality Assurance Plan for the sampling of sludge and groundwater at the Pensacola Mill. This plan is being submitted as required by Paragraph 4 of Exhibit 3 of the Consent Order entered between Champion and the DER (OGC File No.: 85-0619).

Champion is in the process of preparing a report containing all past priority pollutant metal and pH analyses from the primary settling basin and sludge pond, as well as influent analyses performed while the bag plant was in operation. This report will be submitted to the Department when complete.

If there are any questions concerning this matter, please call.

Sincerely,

David T. Arceneaux
Supervisor
Environmental Control

DTA/dj
Attachment

xc: Elizabeth Solek
Law Engineering

RECEIVED
NOV 26 19[redacted]
[redacted]WEST FLORIDA DER

ORIN.

QUALITY ASSURANCE PROJECT PLAN
TRANSMITTAL FORM
(FDER Internal Use Only)

- ☐ P-CAP
- ☐ Direct Contract
- ☐ Shared Contract
- ☑ CAP, RI/FS
- ☐ Generic Plan
- ☐ Inhouse Project
- ☐ Other _____

- ☐ Permit Related
- ☑ Enforcement Related

TITLE: QA Plan For Contamination Assessment Plan
Champion International Corp. (Bay Mnfg. Facility)

DISTRICT OFFICE: NWD

PROJECT COUNTY: Escambia

REVISION NO:

COMPANY PREPARED BY: Law Engineering Testing Co.

COMPANY PREPARED FOR: Champion Int. Corp.

DATE RECEIVED IN DISTRICT: Nov 26, 1986 misplaced in house

DATE FORWARDED TO TALLAHASSEE: Dec 29, 1986

DISTRICT OFFICE COORDINATOR: Bill Kellenberger

WERE THE FOLLOWING ELEMENTS PROVIDED

	YES	NO			YES	NO	
1.	☑	☐	Title & Signature	10.	☑	☐	Data Reduction
2.	☑	☐	Table of Contents	11.	☑	☐	Internal QA Checks
3.	☑	☐	Project Description	12	☑	☐	Systems Audits
4.	☑	☐	Organization	13.	☑	☐	Maintenance
5.	☑	☐	QA Objectives Table	14.	☑	☐	Assess Data
6.	☑	☐	Sampling Procedures	15.	☑	☐	Corrective Action
7.	☑	☐	Sample Chain of Custody	16.	☑	☐	QA Reports
8.	☑	☐	Calibration & Frequency	17.	☑	☐	Resumes
9.	☑	☐	Analytical Procedures				

If any boxes are checked "NO", return to preparer with instructions to complete. Date returned: _____.

PERM Form 86-5

86/11/6-1

375 Muscogee Road
P.O. Box 87
Cantonment, Florida 32533-0087
904 968-2121

Champion
Champion International Corporation

October 31, 1986

Mr. Robert V. Kriegel
District Manager
State of Florida
Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Bill

Dear Mr. Kriegel:

Champion has reviewed your letter of August 11, 1986 in regard to the PCAP prepared by Law Engineering, and accepts the additions and changes submitted by the Department. We have completed the Quality Assurance/Quality Control Plan for the on-site testing and will submit the plan by November 7, 1986. The plan will cover the following activities:

1. Set up a sampling procedure and testing protocol to analyze sludges from the primary settling basin and a sludge dewatering pond for pH, priority pollutant metals, and EP toxicity.

2. Sample monitoring wells MW-1, MC-S6, and supply well No. 23, and analyze for pH, specific conductivity, priority pollutant metals and TOC.

In addition, Champion will submit all past data for priority pollutant metals, EP toxicity, and pH from sludge and wastewater into the primary settling basin.

If there are any other areas which the Department believes need to be addressed as part of the PCAP or the Consent Order, please contact me at 968-2121, Extension 2519.

Sincerely,

David T. Arceneaux
Supervisor
Environmental Control

DTA/dj

cc: Elizabeth Solek
Law Engineering

RECEIVED
NOV 06 1986
NORTHWEST FLORIDA
DER

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT

160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5794

August 11, 1986

Mr. Edward Clem
Champion International Corp.
Post Office Box 87
Cantonment, Florida 32533

Dear Mr. Clem:

The Preliminary Contamination Assessment Plan (PCAP) prepared by Law Engineering Testing Company for Champion Paper Corp. has been reviewed by the Department. The plan is hereby approved with the following additions and changes:

1. Analyze the sludges in the primary pond and sludge pond for the priority pollutant metals and pH.

2. Submit any past priority pollutant metal and pH analyses from the primary pond and sludge pond taken during the operation of the bag plant.

3. Submit any past influent analyses performed while the bag plant was in operation.

4. Within 90 days of approval by the Department of the revised groundwater monitoring plan, submitted to the Department's Industrial Wastewater Program on June 17, 1986, sample all approved monitoring wells and submit analyses for pH, specific conductivity, priority pollutant metals and TOC.

5. Submit a Quality Assurance/Quality Control Plan (QA/QC) as required in the Consent Order.

No on-site activities may commence until the QA/QC Plan has been reviewed and approved by the Department.

If you have any questions regarding this matter contact Rick Singer at 436-8360.

Sincerely,

Robert V. Kriegel
District Manager

RVK/rsf

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ Loctn: _____
To: _____ Loctn: _____
To: _____ Loctn: _____
From: _____ Date: _____

TO: Robert V. Kriegel

THROUGH: Thomas W. Moody

FROM: Richard A. Singer

DATE: August 5, 1986

SUBJECT: PCAP, Champion International Corp.

In talking with Mike Kennedy we are of the opinion that due to the complexity of the groundwater system, picking two or three wells to sample as indicators of groundwater contamination is a little like shooting fish in a barrel. Given the time delays incurred in this case, I feel the additional time to ensure the wells are properly placed is not excessive in exchange for the broader more reliable data base.

RAS/rsf

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE	
To:	Loctn:
To:	Loctn:
To:	Loctn:
From:	Date:

TO: William E. Kellenberger

FROM: Richard A. Singer

DATE: June 4, 1986

SUBJECT: Champion PCAP Submitted 5-16-86

c1 sent to EMF 12 June — Ker MTNG

We have received a supplement to the PCAP submitted by Champion March 18, 1986 and prepared by Law Engineering Testing Company. This supplement calls for the sampling of two downgradient wells and one upgradient well. They propose analyzing for lead, chromium, and cadmium. They did not include any information substantiating their reasons for choosing the wells, their location, or other information needed to evaluate their adequacy as monitoring wells. Furthermore, no QA/QC plan was submitted as required by the Consent Order.

The calculations for the metals concentration in the wastewater and metals loading of sediments were based on EP Toxicity results and, as a result, these calculations are invalid.

I am becoming increasingly frustrated in my attempts to see that the orders for corrective action, as required by the Consent Order are adequately met. I have on three separate occasions, during the N.O.V.-C.O. negotiations, in your office and via the telephone, tried to explain to Mr. Clem what was required by the C.O. The three submittals from Champion indicate that either I have failed to adequately communicate to Mr. Clem the C.O. requirements or they (Champion) are intentionally avoiding or postposing compliance. I see two alternatives available to solve this problem. First, if the problem is my inability to communicate the Department's requirements to Mr. Clem, someone other than myself should administer this C.O. and explain the requirements to Mr. Clem. Second, if Champion is trying to avoid or postpone compliance, we should seek enforcement of the Consent Order.

RAS/rsf

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE
To: Rick Singer LOCTN: Pensacola
To: _____ LOCTN: _____
To: _____ LOCTN: _____
FROM: Z. Kulakowski DATE: 6-4-86

TO: Rick Singer, Northwest District

THROUGH: John Gentry, Bureau of Operations

FROM: Zoe Kulakowski, Bureau of Operations ZK

DATE: June 3, 1986

SUBJECT: Champion International Corporation, Cantonment Mill, Pensacola

---

Review of the PCAP Supplement for the referenced site cannot be completed until the following information is provided:

1. A scaled site map showing pertinent features such as existing and proposed well locations, Eleven Mile Creek, primary settling pond, and the sludge drying bed.

2. Well construction information and drilling logs. All wells should monitor the water table zone of the aquifer.

3. Site location with regard to major roads.

ZK/cs

RECEIVED
JUN -6 1986
NORTHWEST FLORIDA
DER

One Champion Plaza
Stamford, Connect[redacted]6921
203 358-7847

Edward O. Clem
Director Environmental Affair[redacted]

Champion
Champion International Corporation

May 16, 1986

Bill

Mr. Thomas Moody
Special Program Supervisor
State of Florida
Department of Environmental Regulation
160 Governmental Center
Pensacola, FL 32501-5794

Re: Preliminary Contamination Assessment Plan Supplement
former Champion Bag Manufacturing Facility

Dear Mr. Moody,

Under separate cover you will be receiving a supplement to the Preliminary Contamination Assessment Plan (PCAP) previously submitted by Champion to address the question of potential contamination associated with former bag manufacturing discharges to the waste treatment plant of the Cantonment Mill of Champion. We have attempted to address the concerns of the DER in this amended plan about potential groundwater contamination.

We hope that we now have a PCAP that meets all the requirements of your agency. After you have had an opportunity to review the plan if there are any questions please let me know.

Sincerely,

Edward O. Clem

Edward O. Clem

cc: Ted Crane/Pensacola
Bob Kriegel/State of Florida, DER
D. Wigger

One Champion Plaz[redacted]
Stamford, Connecti[redacted]921
203 358-7847

Edward O. Clem
Director Environmental Affairs[redacted]

Champion
Champion International Corporation

May 16, 1986

Mr. Thomas Moody
Special Program Supervisor
State of Florida
Department of Environmental Regulation
160 Governmental Center
Pensacola, FL 32501-5794

Re: Preliminary Contamination Assessment Plan Supplement
former Champion Bag Manufacturing Facility

Dear Mr. Moody,

Under separate cover you will be receiving a supplement to the Preliminary Contamination Assessment Plan (PCAP) previously submitted by Champion to address the question of potential contamination associated with former bag manufacturing discharges to the waste treatment plant of the Cantonment Mill of Champion. We have attempted to address the concerns of the DER in this amended plan about potential groundwater contamination.

We hope that we now have a PCAP that meets all the requirements of your agency. After you have had an opportunity to review the plan if there are any questions please let me know.

Sincerely,

Edward O. Clem

Edward O. Clem

cc: Ted Crane/Pensacola
Bob Kriegel/State of Florida, DER
D. Wigger

LAW ENGINEERING TESTING COMPANY
geotechnical, environmental & construction materials consultants
5500 GUHN ROAD
HOUSTON, TEXAS 77040
(713) 939-7161

May 15, 1986

State of Florida
Department of Environmental Regulation
160 Government Center
Pensacola, Florida 32501-5794

ATTENTION: Mr. Tom Moody
Special Programs Supervisor

SUBJECT: PRELIMINARY CONTAMINATION ASSESSMENT PLAN SUPPLEMENT
Former Champion Bag Manufacturing Facility
Cantonment Mill
Pensacola, Florida
LAW ENGINEERING PROJECT NO. HT-1671-85W

Gentlemlen:

Per the request of Mr. Edward Clem of Champion International on May 15, 1986, we are sending the referenced letter directly to your office, in order to expedite matters. Additionally, we are including tables which show calculation of the concentrations presented in Table 1 of the PCAP, which was submitted to your office. We hope that these tables will be useful in understanding the information presented in the PCAP.

Sincerely,

LAW ENGINEERING TESTING COMPANY

Elizabeth A. Solek
Project Hydrogeologist

Richard A. Pearce, P.E.
Chief Engineer

EAS/RAP/cg

LAW ENGINEERING TESTING COMPANY
geotechnical, environmental & construction materials consultants
5500 GUHN ROAD
HOUSTON, TEXAS 77040
(713) 939-7161

May 14, 1986

Champion International Corporation
One Champion Plaza
Stamford, CT 06921

ATTENTION: Mr. Edward Clem
Director, Environmental Affairs

SUBJECT: PRELIMINARY CONTAMINATION ASSESSMENT PLAN SUPPLEMENT
Former Champion Bag Manufacturing Facility
Cantonment Mill
Pensacola, Florida
LAW ENGINEERING PROJECT NO. HT-1671-85W

Gentlemen:

We understand that the Florida Department of Environmental Regulation (FDER) has reviewed the Preliminary Contamination Assessment Plan (PCAP) submitted by Champion. The FDER has indicated continued concern with possible ground-water contamination from plant bag plant activities. In light of this, we are recommending that the PCAP previously submitted be amended to include a ground-water monitoring program to evaluate the impact of prior bag plant discharge on ground-water quality.

Potentially there are two directions in which contaminated ground water could move from the effluent ponds. Downgradient along Eleven Mile Creek or vertically downward towards the cone of depression created by the Champion water supply wells. Well MC-S6 is located downgradient of the mill wastewater treatment area and it monitors shallow ground water along Eleven Mile Creek. Champion Well 23 is a water supply well which would monitor discharge towards the cone of depression. Well MW-1 would be monitored for background water quality.

Therefore MW-1 would be the background well and wells 23 and MC-S6 would serve as compliance wells. All wells would be monitored for the constituents of concern which are lead, chromium and cadmium.

An evaluation of the existing groundwater monitoring system is currently in progress. This evaluation has reached the conclusion that existing well MW-1 is constructed improperly and is in the wrong permeable unit to properly monitor background water quality. Therefore, sampling for bag plant constituents will be contingent upon the schedule of replacement of MW-1 and approval by FDER. We anticipate that this well can be replaced within two weeks of FDER approval of the plant ground-water monitoring plan.

If there are any questions regarding the proposed sampling please do not hesitate to call.

Sincerely,

LAW ENGINEERING TESTING COMPANY

Elizabeth A. Solek
Project Hydrogeologist

Owen D. Sveter, P.G., P.G.
Senior Hydrogeologist

REGISTERED GEOLOGIST
CERTIFICATE NO.
15936
OWEN D.
SVETER
Date Signed 5/14/86
ARIZONA, U.S.A.

Richard A. Pearce, P.E.
Chief Engineer

EAS/ODS/RAP/cg

LAW ENGINEERING TESTING COMPANY

TABLE A-1: ANALYSES OF METAL CONCENTRATIONS - AQUAFLEX INKS

BAG PLANT METAL LOADINGS: CONCENTRATIONS IN MILL WASTEWATER AND SLUDGE

SAMPLE DESCRIPTION:PIONEER INK ANALYSES AQUAFLEX INKS
EP TOXICITY RESULTS

METAL	INK CONCENTRATIONS	BAG PLANT WASTEWATER CONCENTRATIONS		CONCENTRATIONS IN MILL WASTEWATER		MONTHLY AVERAGE METAL CONCENTRATIONS IN MILL SLUDGE BASED ON PERCENT INK SOLIDS FROM PIONEER RESULTS		
	INK CONCENTRATION MG/L	INK CONCENTRATIONS LBS/GAL	INK LOADING LBS/MO	AVERAGE MONTHLY CONCENTRATION LBS/GAL	AVERAGE MONTHLY CONCENTRATION MG/L	INK SOLIDS METAL LOADING LBS/MO	METAL CONCENTRATION IN MILL SLUDGE (50 TONS/DAY) PPM	METAL CONCENTRATION IN MILL SLUDGE (150 TONS/DAY) PPM
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
Arsenic	0.251	2.0976E-06	5.2439E-03	6.9919E-11	8.3648E-06	5.2439E-04	1.7480E-04	5.8266E-05
Barium	1.9	1.5878E-05	3.9695E-02	5.2927E-11	6.3319E-06	3.9695E-03	1.3232E-03	4.4106E-04
Mercury	10.1	8.4404E-05	2.1101E-01	2.8135E-10	3.3659E-05	2.1101E-02	7.0337E-03	2.3446E-03
Nickel	8.8	7.3540E-05	1.8385E-01	2.4513E-10	2.9327E-05	1.8385E-02	6.1284E-03	2.0428E-03
Selenium	0.01	8.3569E-08	2.0892E-04	2.7856E-13	3.3326E-08	2.0892E-05	6.9640E-06	2.3213E-06
Silver	2.7	2.2564E-05	5.6409E-02	7.5212E-11	8.9980E-06	5.6409E-03	1.8803E-03	6.2676E-04
Zinc	42	3.5099E-04	8.7747E-01	1.1700E-09	1.3997E-04	8.7747E-02	2.9249E-02	9.7497E-03

EXPLANATION OF COLUMN CALCULATIONS

(A)= HIGHEST CONCENTRATIONS OF AQUAFLEX INKS
(B)= (A) * 3.79 L/GAL * 1 G/1000 MG * 1 LB/453.52 G
(C)=(B) * 2500 GAL/MONTH
(D)= (C) /(25000000 GAL/DAY * 30 DAYS/MONTH)
(E) = (D) * 453.52 G/LB * 1000 MG/G * 1 GAL/3.79 L
(F)=(C)*PERCENT SOLIDS(10%)
(G)=(F)*1000000/(50 TONS/DAY * 2000 LBS/1 TON * 1 MONTH/30 DAYS)
(H)=(F)*1000000/(150 TONS/DAY * 2000 LBS/1 TON * 1 MONTH/30 DAYS)

TABLE A-2: ANALYSES OF METAL CONCENTRATIONS - INK WASHUPS

BAG PLANT METAL LOADINGS: CONCENTRATIONS IN MILL WASTEWATER AND SLUDGE

SAMPLE DESCRIPTION:EPS INK WASHUP ANALYSES SVM4362-H,J,L
EP TOXICITY RESULTS

INK ID AND METAL	INK WASHUP CONCENTRATIONS	BAG PLANT WASTEWATER CONCENTRATIONS		CONCENTRATIONS IN MILL WASTEWATER		MONTHLY AVERAGE METAL CONCENTRATIONS IN MILL SLUDGE BASED ON PERCENT INK SOLIDS FROM EPS RESULTS		
	INK WASHUP CONCENTRATION MG/L	INK WASHUP CONCENTRATIONS LBS/GAL	INK WASHUP LOADING LBS/MO	AVERAGE MONTHLY CONCENTRATION LBS/GAL	AVERAGE MONTHLY CONCENTRATION MG/L	INK WASHUP SOLIDS METAL LOADING LBS/MO	METAL CONCENTRATION IN MILL SLUDGE (50 TONS/DAY) PPM	METAL CONCENTRATION IN MILL SLUDGE (150 TONS/DAY) PPM
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
SVM4362-H								
Chromium	15.3	1.2786E-04	3.1965E-01	4.2620E-10	5.0989E-05	3.1965E-02	1.0655E-02	3.5517E-03
Lead	224	1.8719E-03	4.6798E+00	6.2398E-09	7.4650E-04	4.6798E-01	1.5599E-01	5.1998E-02
Cadmium	0.06	5.0141E-07	1.2535E-03	1.6714E-12	1.9996E-07	1.2535E-04	4.1784E-05	1.3928E-05
SVM4362-J								
Chromium	1.2	1.0028E-05	2.5071E-02	3.3427E-11	3.9991E-06	2.5071E-03	8.3569E-04	2.7856E-04
Lead	17.2	1.4374E-04	3.5934E-01	4.7913E-10	5.7321E-05	3.5934E-02	1.1978E-02	3.9927E-03
Cadmium	0.02	1.6714E-07	4.1784E-04	5.5712E-13	6.6652E-08	4.1784E-05	1.3928E-05	4.6427E-06
SVM4362-L								
Chromium	8.8	7.3540E-05	1.8385E-01	2.4513E-10	2.9327E-05	1.8385E-02	6.1284E-03	2.0428E-03
Lead	68.2	5.6994E-04	1.4248E+00	1.8998E-09	2.2728E-04	1.4248E-01	4.7495E-02	1.5832E-02
Cadmium	0.02	1.6714E-07	4.1784E-04	5.5712E-13	6.6652E-08	4.1784E-05	1.3928E-05	4.6427E-06

EXPLANATION OF COLUMN CALCULATIONS
(A)= INK WASHUP CONCENTRATIONS
(B)= (A) * 3.79 L/GAL * 1 G/1000 MG * 1 LB/453.52 G
(C)=(B) * 2500 GAL/MONTH
(D)= (C) /(25000000 GAL/DAY * 30 DAYS/MONTH)
(E) = (D) * 453.52 G/LB * 1000 MG/G * 1 GAL/3.79 L
(F)=(C)*PERCENT SOLIDS(10%)
(G)=(F)*1000000/(50 TONS/DAY * 2000 LBS/1 TON * 1 MONTH/30 DAYS)
(H)=(F)*1000000/(150 TONS/DAY * 2000 LBS/1 TON * 1 MONTH/30 DAYS)

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT

160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5794

May 1, 1986

Mr. Edward O. Clem
Champion International Corp.
One Champion Plaza
Stamford, Connecticut 06921

Dear Mr. Clem:

We have reviewed the Preliminary Contamination Assessment Plan submitted by your letter dated March 20, 1986 and find it unacceptable. We further conclude that Champion has not demonstrated a responsible effort to resolve the violation cited in Consent Order OGC file No. 85-0619, executed October 31, 1985.

The re-submittal repeats the deficiencies of the original plan, submitted December 27, 1985. The Consent Order clearly calls for Champion to physically determine, by actual sampling and analysis, whether environmental media have been contaminated by Champion's past operations. Both plans have merely reviewed the plant's history and argue that there could be no contamination and therefore no need to make any such determination. The plans are based on unsupported statements such as "according to plant personnel," "would not exceed," "approved facilities," and the like. The purpose of an assessment is to provide physical proof, not to state allegations and rebuttals. The plans you have submitted do not propose any collection of physical proof through sampling and analysis of the affected media.

Accordingly, we will proceed with an enforcement case unless you resolve this matter immediately.

Sincerely,

Robert V. Kriegel
District Manager

RVK/tmf

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ Loctn: _____
To: _____ Loctn: _____
To: _____ Loctn: _____
From: _____ Date: _____

TO: Thomas W. Moody

THROUGH: William E. Kellenberger

FROM: Richard A. Singer

DATE: April 15, 1986

SUBJECT: C.O. - PCAP Champion International Corp.

I have reviewed the PCAP prepared by Law engineering Testing Corp. for Champion. The PCAP does not meet the requirements of Exhibit III of the Consent Order entered into by the Department and Champion on October 31, 1985. In fact, the submission by Law seems to be more of an argument against performing the PCAP. This is the second submission of a PCAP by Champion and the second time it has failed to meet the requirements of the Consent Order. The language of Exhibit III is straightforward and easily understood. If Champion is of the opinion that a PCAP is not necessary, that argument should have been presented during the negotiation of the Consent Order. Given the resources of Champion and the existence of monitoring wells on site, the preparation and execution of an adequate PCAP should have been a task easily and quickly performed. Instead, 24 weeks later, the Department is no closer to having its concerns addressed or the conditions of the Consent Order met. As a result of Champion's failure to meet the conditions of the Consent Order, I feel the Department should consider filing a petition for the enforcement of the Consent Order.

RAS/rsf

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ Loctn: _____
To: _____ Loctn: _____
To: _____ Loctn: _____
From: _____ Date: _____

TO: William E. Kellenberger

FROM: Richard A. Singer RAS

DATE: April 15, 1986

SUBJECT: Champion International Corp. PCAP

Exhibit III of the Consent Order entered into by the Department and Champion on October 31, 1985 requires Champion to prepare a Preliminary Contamination Assessment Plan (PCAP) to describe the tasks they propose to perform in order to determine whether their activities have contaminated soil sediment, surface water or ground water. This plan was to include sampling and analyses for priority pollutant metals and priority pollutant organics. The PCAP as prepared for Champion by Law Engineering Testing Company does not describe any actions to be taken. Instead, they use mathematical models and one set of analyses to conclude that significant impact to surface water or ground water has not occurred. Below are comments of the information provided by Law:

Law used the metals concentrations from the analyses of the ink washup to calculate the estimated concentration of metals in the mill wastewater. Since this estimate did not exceed state standards for Class III waters, they concluded that the mill waste waters had no impact on surface waters. Law engineering did not present any hard data, past or present, for the mill influent or effluent to further substantiate this claim.

Law engineering provided past analyses of the sludges showing them not to be E.P. Toxic. They also estimated the maximum average monthly metal concentration in the sludge. They therefore conclude the sludges did not significantly impact surface water or ground water. Law has provided no analyses, past or present, for total metals of the sludges. The E.P. Toxicity data shows only that the wastes were not RCRA regulated wastes.

Law Engineering has provided no factual evidence on which to base their conclusions. Missing is actual analyses of the sludges or surface waters. Even more conspicuous in its absence, is the lack of any ground water analyses.

The information provided by Law does not meet the requirements of Exhibit III of the Consent Order nor does it answer any of the concerns to be addressed by the PCAP. In fact, the information provided by Law has raised new questions. These include the impact of ground water by the sludges in the area of the drying beds and at the sludge disposal sites.

RAS/rsf

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

Interoffice Memorandum

FOR ROUTING TO OTHER THAN THE ADDRESSEE

To: _____ Locn: _____
To: _____ Locn: _____
To: _____ Locn: _____
From: _____ Date: _____

TO: Tom Moody, Northwest District

THROUGH: John Gentry, Bureau of Operations

FROM: Steve Brashers, Bureau of Operations SB

DATE: April 9, 1986

SUBJECT: Review of PCAP, Champion International Corporation Bag Plan Facility, Pensacola, Florida

---

The Preliminary Contamination Assessment Plan submitted by Law Engineering Testing Company has been reviewed for compliance with the Department's objectives for groundwater contamination cases. These comments are offered for your consideration.

The plan contains no provisions for the testing of groundwater contamination. Through empirical data and calculations, the potential metal concentration in the mill's wastewater and sludges are within Department standards. The last equation calculating the metal concentration in the mill sludge has an error in the month to day conversion factor and should be inverted. The results in Table 1 appear to be calculated using the correct factor.

I agree with Law Engineering that the majority of the heavy metal contaminants would settle into the sludge beds, and the wastewater discharge poses no probable threat to the groundwater. But since the wastewater discharge cannot be tested, I believe some type of groundwater testing should be initiated to check compliance with Water Quality Standards.

If you have any questions, please feel free to contact myself or John Gentry at Suncom 278-0190.

SB/cs

RECEIVED
APR 16 1986
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State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And To Other Than The Addressee

To: _____ Loctn.: _____
To: _____ Loctn.: _____
To: _____ Loctn.: _____
From: _____ Date: _____

Reply Optional [ ] Reply Required [ ] Info. Only [ ]
Date Due: _____ Date Due: _____

April 7, 1986

TO : Tom Moody

FROM : Robert J. Brazzell

SUBJECT: Champion Preliminary Contamination Assessment Plan

I have reviewed subject plan and provide the following observation.

If washwater concentration of chromium and lead exceeded EP toxicity limits the sludges from the settling basin would undoubtedly be high in these elements. Were sludges classified as hazardous?

Was one of the "approved" landfills associated with Cow Devil Creek?

I concur with continued ground and surface water monitoring, but suggest adding mercury and cadmium to the parameter list.

Hopefully with the new process this particular problem will not recur.

RJB/rbg

One Champion Plaza
Stamford, Connecticut 06
203 358-7847

Edward O. Clem
Director Environmental Affairs

Champion
Champion International Corporation

March 20, 1986

Mr. Tom Moody
Special Programs Supervisor
State of Florida Dept. of Envr. Regulation
Northwest District
160 Government Center
Pensacola, Florida 32501

Dear ~~Mr. Moody~~ Tom:

In compliance with the provisions of the consent agreement (Consent Order 85-0619) between Champion and the Florida DER, attached is a Preliminary Contamination Assessment Plan (PCAP) prepared by our consultant, Law Engineering. This PCAP addresses the question of possible environmental impacts caused by the discharge of washups from the ink systems of printing operations that formerly were in operation at the former bag plant at Cantonment.

We believe this submittal now complies with the content required by the department for such PCAP's and apologize for the delay in getting this information to you. I would suggest that after your staff has an opportunity to study this document, we plan to meet to discuss any questions that may remain.

In the meantime, if there are any questions, please contact me.

Sincerely,

Edward O Clem

EC:ma

cc: Robert V. Kriegel, DER
George Hoffman, DER
Rick Singer, DER
Ted Crane
Dick Wigger
Ben Bilus
Richard Pearce, Law Engineering

LAW ENGINEERING TESTING COMPANY
geotechnical, environmental & construction materials consultants
5500 GUHN ROAD
HOUSTON, TEXAS 77040
(713) 939-7161

March 18, 1986

Champion International Corporation
One Champion Plaza
Stamford, CT 06921

ATTENTION: Mr. Edward Clem
Director, Environmental Affairs

SUBJECT: PRELIMINARY CONTAMINATION ASSESSMENT PLAN
Bag Manufacturing Facility
Pensacola Facility, Pensacola, Florida
LAW ENGINEERING JOB NO. HT-1671-85W

Gentlemen:

We have prepared the Preliminary Contamination Assessment Plan (PCAP) for the bag manufacturing plant at the Champion Pensacola facility located near Pensacola, Florida. We certify that in our professional opinion, the PCAP meets the requirements of the Consent Order agreed to by the Florida Department of Environmental Regulation and Champion International Corporation, in particular Exhibit III to the Consent Order. The plan is adequate to evaluate the presence of hazardous constituents in the bag plant manufacturing facility wastewater discharge and evaluate whether soil, sediment surface water or ground-water contamination has occurred as a result of this discharge.

Sincerely,

LAW ENGINEERING TESTING COMPANY

Elizabeth A Solek
Elizabeth A. Solek
Project Hydrogeologist

REGISTERED GEOLOGIST
CERTIFICATE NO.
15936
OWEN D.
SVETER
Date Signed 3/18/86
ARIZONA, U.S.A.

Richard A. Pearce
Richard A. Pearce, P.E.
Chief Engineer

Owen D. Sveter, P.G., P.E.G.
Senior Hydrogeologist

EAS/RAP/ODS/cg

RECEIVED
MAR 2 1 1986
NORTHWEST FLORIDA
DER

PRELIMINARY CONTAMINATION

ASSESSMENT PLAN

PREPARED BY

LAW ENGINEERING

FOR

CHAMPION INTERNATIONAL

PENSACOLA FACILITY

PENSACOLA, FLORIDA

SUMMARY

This investigation was performed to address potential soil, sediment, surface water or ground-water contamination resulting from discharge of process ink wash-up wastewater from the bag manufacturing plant to the wastewater treatment system.

This preliminary evaluation of potential contamination of surface and groundwater sources has been performed and the following pertinent findings and conclusions are summarized as follows:

- The bag plant facility ceased operations before March 1, 1986. Only water soluble low lead and chromium inks were used in the bag plant between early 1985 (February - March) and February, 1986. Prior to this time, water based inks with higher concentrations of lead and chromium were discharged to the wastewater system.

- Ninety percent of the solids from the wastewater treatment stream settle out in the primary settling pond. All solids in the form of sludges are removed from the primary settling pond on an approximate six month basis and are then placed in sludge drying beds. The dried sludges are removed from the site and are disposed of in approved facilities in Florida and Alabama.

- Analyses of sludge samples obtained from the sludge drying beds from November, 1983 to March, 1985, found no constituents which exceeded EP toxicity maximum concentrations for priority pollutant metals. Calculations based upon concentrations of high lead and chromium ink washup analysis show that such quantities diluted by the plant waste water streams would not exceed stream standards.

LAW ENGINEERING TESTING COMPANY

- Treated mill effluent tested in 1985, is not believed to exceed Class III stream standards for any of the constitutents expected from the inks which are discharged into the wastewater treatment system.

As a result of this assessment, it is our opinion that the past discharges of high lead and chromium ink washups in the wastewater treatment system has not resulted in environmental degradation to the soil, sediments, surface or groundwater at the site. The past discharge did not result in environmental degradation primarily due to dilution of the waste stream when mixed with the plant waste water effluent.

Therefore, no further testing or sampling, other than normal wastewater and groundwater sampling required by the current operating permits, are recommended.

PROJECT BACKGROUND

Champion International has recently acquired the Pensacola, Florida mill facilities from St. Regis Corporation. A bag plant was located at this facility which manufactured finished printed, non-printed, and protective coated paper bags. Bag printing was also performed at this plant with large, mimeo-type printers. Operation of the bag plant ceased before March 1, 1986.

Water soluble inks were used in the printing of paper bags. A continuous stream of water was passed over the printer stencil as an ink washup. The washup was recirculated until the ink solids in the washup reached a concentration of 3 to 10 %, at which time the washup water was replaced with clean water. In the past, the ink saturated wash water was discharged into the plant's wastewater treatment system. Alcohol soluble inks were also used in the printing of plastic bags. This washup however, was stored in 55 gallon drums and disposed of off site in a licensed facility.

Prior to closure, only inks with low concentrations of the constituents of concern (lead and chromium) were being used. Additionally, waste process waters were put through an Alar system prior to entering the mill wastewater treatment system, so that high concentrations of hazardous constituents were prevented from entering the system.

In January, 1985, the Florida Department of Environmental Regulation (FDER) over requested analyses of the ink washups for lead, chromium and cadmium using the EP Toxicity Test Procedures. At the time that these were requested, the bag plant was using high lead inks. The analyses were completed and submitted to the state in March, 1985. These results indicated that the wash waters contained concentrations of chromium and lead which exceeded EP Toxicity Limits.

The ink washup was produced at a maximum rate of 2500 gallons of wash water per month. Considering that the wastewater treatment system handles 750 million gallons per month, this amount is an extremely small percentage (approximately 3×10^{-4} percent) of monthly flow.

The untreated contaminated wastewater would have entered the primary settling basin. Approximately 90% of the solids settle out in this basin according to plant personnel. The sludges were removed from the primary settling basin and placed into sludge drying beds. The dried sludges were removed from the drying beds approximately every six months and were transported to approved landfills in Florida and Alabama.

SCOPE OF PCAP

There are several factors which were considered in evaluating the impact of the bag plant discharge at the site. These factors include the following:

- The bag plant is no longer in operation. For many months prior to closure of the plant, low lead inks were used and thus, high lead ink washups, bag plant discharge, and sludges containing high lead ink solids, are no longer on site.

- Dilutions of the bag plant discharge within the plant wastewater treatment system result in concentrations that are extremely low.

- The sludge, which would be potentially contaminated with high metal concentrations from ink solids, has been removed from the site and was disposed of in approved landfills.

Therefore, the scope of this evaluation is broken down as follows:

- Evaluate the history and use of inks at the bag facility and the fate of ink constituents in the mill wastewater treatment system.

- Determine potential concentrations of ink constituents from available ink and ink washup analyses and evaluate the past potential impact and significance of the potential ink constituent concentrations on the environment.

- Compare the results of past constituent testing on sludges and wastewater to the calculated diluted quantities.

- Evaluate the past impacts of discharges and compare them with published standards.

DATA EVALUATION

An evaluation of previous testing of inks and ink washups, of manufacturer's material safety data sheets for the inks generally used at the plant, and a literature search for information concerning ink wastes from bag plant operations was conducted.

According to the consent order, the ink washups were to be tested for the following constituents:

- Priority pollutant metals.
- Priority pollutant organic chemicals.
- All organic chemicals with peaks greater than 5 ug/l.

Pesticides can be eliminated from the list of priority pollutants potentially present in bag plant discharge. The only pesticide used at the bag plant facility was the insecticide pyrethrin. This insecticide was applied to bag paper during the converting process. The pyrethrin insecticide washup, waste coating materials and scrap paper were containerized in 55 gallon drums and stored prior to disposal at an approved facility.

The water based Aquaflex inks used in the process contain less than 10 percent alcohols. The alcohols consist of ethanol and isopropol alcohol which, according to the manufacturer, are biodegradable. This information was obtained in a telephone conversation with Mr. Mark Bishop, chemist for Sinclair Valentine, the ink manufacturer and supplier for the bag plant operation. Thus, organic compounds in the ink washups would be expected to have been biodegraded in the mill wastewater treatment system.

The inks, however, are known to contain priority pollutant metals, particularly lead, chromium and cadmium. Information concerning concentrations of these constituents in the inks and ink washups is available from previous analyses. Therefore, our evaluation is based upon the fact that small quantities of ink washup waters with relatively high concentrations of priority pollutant metals consisting of cadmium, chromium and lead were discharged into the plant waste water treatment system.

Potential concentrations of these metals in the mill wastewater and sludge were determined. The calculations were based on the following information gained from plant personnel:

- Monthly bag plant wastewater flow was approximately 2500 gallons.
- Daily total plant wastewater flow is approximately 25 million gallons.
- Daily mill sludge production ranges from 50 to 150 tons.

Results of Extraction Procedure (EP) toxicity tests of high lead ink solids are available for the Aquaflex leaded water based inks. These results include the majority of priority pollutant metals, with the exception of antimony, beryllium, copper, and thallium.

Additionally, results of EP toxicity tests of high lead ink washups for the following inks are available:

- Aquaflex Ink containing lead (SVM 4362-H)
- Solvent Flexon Ink containing lead (SVM 4362-J)
- Meteor Ink containing lead (SVM 4362-L)

The washups were tested for chromium, lead, and cadmium.

The calculations of potential concentrations of metals in mill wastewater and sludge were based on ink and ink washup analyses. Since actual ink washup data was available for chromium, lead, and cadmium, this data was used in the calculations. Concentrations of other priority pollutant metals were based on the worst case assumption that bag plant discharge was composed wholly of Aquaflex inks.

Basically, the concentration of the ink solids or washup was converted to a metal loading based on the monthly discharge from the bag plant. This loading was then used to calculate potential concentrations in the mill wastewater. An example of the steps used in this calculation are presented in the Appendix to this report. In every case, the highest concentration was used in the calculation to evaluate worst case conditions.

Potential concentrations of metals were calculated for the volume of sludge produced by the mill. Estimates of solids in the ink washups range from 3 to 10%. It was assumed that metal loading resulting from ink washups was directly related to the percentage of solids in the washups. Again, worst case conditions were assumed. Thus, 10% of the metal loadings were assumed to be solids, and potential metal concentrations in the sludge were based on the resulting solids metal loading. Concentrations in the mill sludge were based on the range of volumes of sludge generated by the mill, as reported by plant personnel. These calculations were based on the smallest daily quantities of sludge reported to be generated from the wastewater treatment system. An example of the steps used in this calculation are presented in the Appendix to this report .

RESULTS

Results of calculation of potential metal concentrations in mill wastewater and sludge are summarized in Table 1. The highest concentrations indicated by these calculations were included in

this table. Also included, for comparison, are Florida General and Class III stream standards for the priority pollutant metals. Maximum EP toxicity metal concentration limits are also presented in this table to evaluate calculated potential sludge concentrations.

The potential metal concentrations in the mill wastewater do not exceed Florida stream standards. Stream standards range from 7×10^{-5} ppm to 1 ppm. Potential metal concentrations range from 5×10^{-8} to 1×10^{-3} ppm, or one to five orders of magnitude less than stream standards.

The calculated potential metal concentrations in the mill sludge are all less than EP toxicity maximum metal concentration limits. The highest metal concentration calculated is mercury (1.1×10^{-2} ppm) which is an order of magnitude less than the EP toxicity limit (2×10^{-1} ppm). Thus, the calculated potential sludge metal concentrations indicate that, if all the metals were leached from the sludge, the EP toxicity metal limits would not be exceeded, and the sludge would not be considered a hazardous waste. Results of EP toxicity tests of sludge from the primary settling basin support these conclusions. These results are presented in Table 2. All concentrations of metals measured in the sludge are below maximum concentration limits for the EP toxicity tests.

CONCLUSIONS

Results of calculation of potential metal concentrations in mill wastewater and sludge indicate the following:

- The calculated potential mill wastewater metal concentrations do not exceed stream water quality standards for Class III streams.

- Potential metal concentrations in mill sludge indicate that EP toxicity limits would not be exceeded by testing of the sludge. This is supported by actual EP toxicity tests of sludge from the primary settling basin.

As a result of our analysis, it is our opinion that past bag plant discharges have had no significant impact on surface or groundwater systems in the site area. We recommend that only continued ground and surface water monitoring for chromium and lead be conducted at the plant as specified by FDER permits.

TABLE 1 : COMPARISON OF CALCULATED POTENTIAL METAL CONCENTRATIONS WITH STATE STANDARDS

METAL	MAXIMUM AVERAGE MONTHLY METAL CONCENTRATION IN MILL WASTEWATER (PPM)	GENERAL AND CLASS III STATE OF FLORIDA STREAM STANDARDS (PPM)	MAXIMUM AVERAGE MONTHLY METAL CONCENTRATION IN MILL SLUDGE (PPM)	MAXIMUM METAL CONCENTRATION LIMITS EXTRACTION PROCEDURE(EP) TEST CHARACTERISTICS (PPM)
Arsenic	8.4 x 10-6	5.0 x 10-2	1.7 x 10-4	5.0
Barium	1.2 x 10-3	1.0	2.5 x 10-1	100.0
Cadmium	2.0 x 10-7	8.0 x 10-3 to 1.2 x 10-3	4.2 x 10-5	1.0
Chromium	5.1 x 10-5	5.00 x 10-2	1.1 x 10-2	5.0
Lead	7.5 x 10-4	3.0 x 10-2	1.6 x 10-1	5.0
Mercury	5.2 x 10-5	2.0 x 10-4	1.1 x 10-2	2.0 x 10-1
Nickel	2.9 x 10-3	1.0 x 10-1	4.0 x 10-1	NA
Selenium	4.7 x 10-8	2.5 x 10-2	7.0 x 10-6	1.0
Silver	9.0 x 10-6	7.0 x 10-5	3.9 x 10-2	5.0
Zinc	4.3 x 10-4	3.0 x 10-2	8.1 x 10-2	NA

TABLE 2

EP TOXICITY TESTS
PRIMARY CLARIFIER SLUDGE

METALS	SLUDGE SAMPLE #1	SLUDGE SAMPLE #2	SLUDGE SAMPLE #3	SLUDGE SAMPLE #4
Arsenic	<0.001	* BDL	<0.001	<0.001
Barium	<1.0	BDL	<1.0	NA
Cadmium	<0.01	BDL	<0.01	<0.01
Chromium	<0.01	BDL	<0.01	<0.01
Copper	<0.01	BDL	NA	<0.01
Lead	<0.1	BDL	<0.1	<0.1
Mercury	0.0007	0.0005	<0.0005	<0.001
Selenium	<0.001	BDL	<0.001	<0.001
Silver	<0.01	BDL	<0.01	<0.01
Zinc	0.03	0.02	NA	0.67

* Below Detection Limit (BDL)

All Units mg/l or ppm
Tests by Pioneer Laboratory, Inc.

SAMPLE	DATE SAMPLED	SAMPLE LOCATION
1	03-13-85	#1 Drying Pond
2	03-06 to 03-18-85	Composite from Dredge Outlet
3	03-22-84	Drying Pond
4	11-29-83	#1 Sludge Pond

APPENDIX

Example Calculation

Potential Metal Concentrations
Mill Wastewater and Sludge

Definition of Variables

A = Highest Metal Concentration of Ink or Ink Washup (mg/l)
B = Ink concentration (lbs/gal)
C = Ink Loading (lbs/mo)
D = Average monthly concentration (lbs/gal)
E = Average monthly concentration (mg/l)
F = Ink solids metal loading (lbs/mo)
G = Metal concentration in mill sludge (ppm)

DESCRIPTION OF CALCULATIONS

All calculated potential concentrations were based on the highest metal concentrations measured in the ink solids or ink washups as appropriate. This concentration was reported in milligrams per liter (mg/l). This concentration (mg/l) was converted as follows:

B (lbs/gal) = A (mg/l) x 3.79 l/gal x 1 g/1000 mg x 1 lb/453.52 g

This concentration (B) was converted to a monthly loading.

C (lbs/mo) = B(lbs/gal) x 2500 gal/mo

The quantity 2500 gal/mo represents average monthly bag plant discharge, as reported by plant personnel. The monthly loading (C) was converted to an average monthly concentration (D) in the mill wastewater. The value 25,000,000 gallons/day (gal/day) represents daily quantities of wastewater flow through the mill wastewater treatment system, as reported by plant personnel.

D (lbs/gal) = C (lbs/mo)/(25,000,000 gal/day x 30 days/mo)

This quantity (D) was then converted back to milligrams per liter (mg/l) in order that comparisons could be made with stream water quality standards.

$$E\ (mg/l) = D(lbs/gal) \times 453.52\ g/lb \times 1000\ mg/g \times 1\ gal/3.79\ l$$

Subsequent to calculation of potential wastewater concentrations, bag plant discharge metal loading (C) was used to calculate ink and ink washup solids loading from the bag plant. This loading was based on a maximum of 10% ink solids in the ink washup, as reported by plant personnel.

$$F\ (lbs/mo) = C\ (lb/mo) \times 0.1$$

This monthly solids loading (F) was used to calculate an average monthly concentration in the mill sludge.

$$G(ppm) = F(lbs/mo) \times 1{,}000{,}000 / (50\ tons/day \times 2{,}000\ lbs/ton \times 1\ mo/30\ days)$$

The value 50 tons/day present in the denominator is the lower end of the range of sludge produced at the mill daily, as reported by plant personnel. The value 1,000,000 in the numerator converts F, which is actually in lbs/lbs, to parts per million (ppm).

All abbreviations used in these calculations are as follows:

g	=	grams
gal	=	gallons
l	=	liters
lbs	=	pounds
mg	=	milligrams
mo	=	month

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT

160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5794

February 18, 1986

Mr. Edward O. Clem
One Champion Plaza
Stamford, CT 06921

Dear Mr. Clem:

This is in response to your letter dated February 13, 1986 requesting an extension to February 28, 1986 to submit the revised plan. This date is acceptable to the Department.

Sincerely,

Thomas W. Moody

Thomas W. Moody, P.E.
Special Programs Supervisor

TWM/wkf

4225

One Champion Plaza
Stamford, Connecticut 06921
203 358-7847

Edward O. Clem
Director Environmental Affairs

EXPRESS MAIL

Champion
Champion International Corporation

February 13, 1986

Mr. Thomas W. Moody, P.E.
Special Programs Supervisor
State of Florida
Department of Environmental Regulation
Northwest District
160 Governmental Center
Pensacola, FL 32501-5794

Dear Mr. Moody:

Reference is made to your letter of January 14, 1986 (which we received January 17, 1986) covering the Preliminary Contamination Assessment Plan (PCAP) prepared by Law Engineering Testing Company and submitted by Champion in compliance with Order Nine of the Consent Order (OCG File 85-0619) entered into by the Department and Champion International Corporation on October 31, 1985. Your letter indicated that the PCAP submitted did not meet the requirements of Exhibit Three as required by Order Nine. On January 23, 1986 I met with Rick Singer and Bill Kellenberger and as a result of this meeting we now have an idea of what changes need to be made in the PCAP. However, we cannot meet the 30 day time limit imposed by your January 14th letter. The information necessary to modify the PCAP should be available within the next week to ten days so I am hereby requesting an extension of time to February 28, 1986 to submit a revised PCAP.

We apologize that there was confusion over what was required and look forward to getting this matter resolved at the earliest possible date. Should you have any questions in the meantime please contact me at (203) 358-7847.

Sincerely,

Edward O. Clem

Edward O. Clem

cc: Dick Wigger
Ted Crane

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT

160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5794

January 14, 1986

Mr. Edward Clem
Director, Environmental Affairs
Champion International Corp.
One Champion Plaza
Stamford, CT 06921

Dear Mr. Clem:

We have reviewed the Preliminary Contamination Assessment Plan (PCAP) prepared by Law Engineering Testing Company and submitted by Champion International Corp. in compliance with Order Nine of the Consent Order (OGC File 85-0619) entered into by the Department and Champion International Corp. on October 31, 1985. As submitted, the PCAP does not meet the requirements of Exhibit Three as required by Order Nine. Please resubmit a PCAP which satisfies the requirements of Exhibit Three within 30 days. Failure to meet the requirements of the Consent Order in a timely manner will result in the consideration of further enforcement action by the Department.

Should you or your consultant wish to meet and discuss the requirements of the Consent Order or if you have any questions regarding this matter, contact Rick Singer at 904-436-8363.

Sincerely,

Thomas W. Moody

Thomas W. Moody, P.E.
Special Programs Supervisor

TWM/rsf

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

NORTHWEST DISTRICT
160 GOVERNMENTAL CENTER
PENSACOLA, FLORIDA 32501-5794

December 31, 1985

Bill

Mr. Edward Clem
Director of Environmental Affairs
One Champion Plaza
Stamford, Connecticut 06921

Dear Mr. Clem:

We have received your letter dated December 27, 1985 containing the preliminary contamination assessment plan (PCAP) required by Consent Order OGC #85-0619.

I have forwarded the PCAP to our ground water personnel for review. Completing this, your office will be contacted to arrange a meeting to discuss the acceptability of the plan.

If you should have any questions regarding this matter, please feel free to contact Mr. Charles Goddard of this office at (904) 436-8320.

Sincerely,

Charles F. Goddard

George E. Hoffman, Jr.
District Enforcement Officer

GEH:cgd

One Champion Plaza
Stamford, Connecticut 06921
203 358-7847

Edward O. Clem
Director Environmental Affairs

3945

Champion
Champion International Corporation

December 27, 1985

Mr. George E. Hoffman, Jr.
District Enforcement Officer
Northwest District
State of Florida
Department of Environmental Regulation
160 Governmental Center
Pensacola, Florida 32501-5794

Re: Consent Order, OGC File No. 85-0619
DER v. Champion International Corporation

Dear Mr. Hoffman,

Attached is the Preliminary Contamination Assessment Plan (PCAP) prepared by Law Engineering Testing Company for the bag manufacturing plant at the Champion International facility at Cantonment, Florida, in accordance with Exhibit III of the above referenced consent order.

Champion is most interested in fulfilling its obligations under the consent order. Towards this end, we would like to meet and review this PCAP and its implementating schedule with you early in January. We will contact you to set a date for this meeting.

In the interim, if you should have any questions, please do not hesitate to call.

Sincerely,

Edward O. Clem

Edward O. Clem

EOC/js

Attachment

RECEIVED
DEC 30 1985
NORTHWEST FLORIDA
DER

CORRESPONDENCE CONTROL FORM

From: Clem, E Champion
No.: NW- 3945
Date: 27 Dec
Due Date: 2 Jan
Subject/Remarks:
Request meeting in early Jan re C.O.

Copy: Moody

Please handle ✓
Handle; run thru me
Review & discuss with me
Draft reply
Action by: NE

To: Hoffman
Date: 30 Dec
Disposition:
Filed:

LAW ENGINEERING TESTING COMPANY
geotechnical, environmental & construction materials consultants
5500 GUHN ROAD
HOUSTON, TEXAS 77040
(713) 939-7161

December 23, 1985

Champion International Corporation
One Champion Plaza
Stamford, CT 06921

ATTENTION: Mr. Edward Clem
Director, Environmental Affairs

SUBJECT: DRAFT PRELIMINARY CONTAMINATION ASSESSMENT PLAN
Bag Manufacturing Facility
Cantonment, Florida
LAW ENGINEERING JOB NO. HT-1671-85W

Gentlemen:

We have prepared the Preliminary Contamination Assessment Plan (PCAP) for the bag manufacturing plant at the Champion facility located in Cantonment, Florida. We certify that in our professional opinion, the PCAP meets the requirements of the Consent Order agreed to by the Florida Department of Environmental Regulation and Champion International Corporation, in particular Exhibit III to the Consent Order. The plan is adequate to evaluate the presence of hazardous constituents in the bag plant manufacturing facility wastewater discharge and evaluate whether soil, sediment surface water or ground-water contamination has occurred as a result of this discharge.

Sincerely,

LAW ENGINEERING TESTING COMPANY

pp Carol Solek
Elizabeth A. Solek
Project Hydrogeologist

Richard A. Pearce
Richard A. Pearce, P.E.
Chief Engineer

pp Donald L Price
Owen D. Sveter, P.G., P.E.G.
Senior Hydrogeologist

EAS/RAP/ODS/cg

PRELIMINARY CONTAMINATION

ASSESSMENT PLAN

PREPARED BY

LAW ENGINEERING

FOR

CHAMPION INTERNATIONAL

PENSACOLA FACILITY

CANTONMENT, FLORIDA

INTRODUCTION

This investigation was developed to address possible soil, sediment, surface water or ground-water contamination resulting from discharge of process wastewater from the Pensacola facility's bag manufacturing activities to the facility's wastewater treatment system.

Representatives of Florida's Department of Environmental Regulation (DER) had requested analysis of wastewater from the bag plant activities. Subsequent analysis indicated that concentrations of metals in the wastewater were higher than limits specified in the EP toxicity test, and that the waste water could be designated a hazardous waste. A consent order was entered into, and Champion agreed to prepare a Preliminary Contamination Assessment Plan (PCAP) to evaluate possible contamination in the wastewater treatment area from bag plant activities. This PCAP was prepared in accordance with Exhibit III to the consent order and applicable regulations.

PROJECT BACKGROUND

Champion International has recently acquired the Pensacola, Florida mill facilities from St. Regis Corporation. A bag plant is located at this facility which manufactures finished printed, non-printed, and protective coated paper bags. Bag printing is also performed at this plant with large, mimeo-type printers.

Water soluble inks are used in the printing of paper bags. A continuous stream of water is passed over the printer stencil as an ink washup. The washup is recirculated until the ink solids in the washup reach a concentration of 3 to 10%, at which time the washup water is replaced with clean water. Until recently, the ink saturated wash water was discharged into the plant's wastewater treatment system. The wash water is now treated by an

Alar unit prior to discharge to the mill wastewater treatment system.

Alcohol soluble inks are used in the printing of plastic bags. During the printing of plastic bags ethanol washup is used which is containerized in 55 gallon drums and stored for off site disposal.

At present, only inks which have low concentrations of the constituents of concern (lead and chromium) are being used. Additionally, as previously stated waste process waters are put through an Alar system prior to entering the mill wastewater treatment system, so that high concentrations of hazardous constituents are prevented from entering the system. The bag plant is expected to cease operations completely by April 1, 1986.

During 1984, when high lead flexographic inks were in use, EP toxicity tests were conducted on the water based ink washups and the results were submitted to the state. Heavy metal concentrations, which included chromium and lead, were found to exceed EP toxicity limits based on these test results. At this time, there is some question as to the validity of the test procedures used to test the ink washup water.

Since the inks originally used are no longer in use, samples of the wash-up water representing past operations are no longer available for testing. Additionally, the ink washup was produced at a rate of 2500 gallons of wash water per month. Considering that the wastewater treatment system handles 840 million gallons per month, this amount is an extremely small percentage (approximately 3×10^{-6}) of monthly flow. In view of this, it is suspected that any impact from bag plant discharges would be limited to primary sludges. A review of the history of bag plant discharge and an analysis of the makeup of the inks will be necessary in order to evaluate the bag plant as a source and to trace contamination generated by the bag plant. The phased approach of the PCAP reflects this initial assessment and allows for a detailed review of the history of the plant prior to developing a detailed sampling plan.

SCOPE OF WORK

As stated previously, there is some question regarding ink constituents and also the fate of the wastewater once it entered the wastewater treatment system. Initially, during Phase I a detailed review of plant records will be undertaken to determine the types of inks which were used in the past. If possible, the number of inks will be narrowed down to a few of the inks which were used for a majority of the time. These few inks will then be tested for constituents which could be harmful to the environment, including metals and organics. It is expected that this analysis will produce several constituents which can be used as tracers which would indicate the presence of contamination from the bag plant.

Since such a relatively small percentage of the total waste water at the plant consisted of bag plant discharge, it will be important to considerably narrow down areas which will be sampled in order to maximize effectiveness of sampling efforts. Thus, a review of the history of wastewater treatment facilities at the mill will be conducted to evaluate when bag plant activities discharged possible contaminated waste into the treatment system and where sludges from bag plant wastewater might have accumulated.

Based on this review, a list of ink constitutents of concern and of areas in the primary settling pond and sludge drying bed areas which should be sampled for possible contaminants from the bag plant will be developed. Using these two lists, a sampling and analysis plan will be developed to trace possible contamination in the treatment system. This plan will include a QA/QC plan in accordance with Exhibit III to the consent order. This plan will be submitted for review by DER prior to implementation.

Upon DER approval, Phase II will begin. During this phase a sediment sampling program will be implemented in the areas identified in Phase I. Once results are available from the lab, these will be interpreted to evaluate the source, extent, and concentration of contaminants. Additionally, imminent hazards to the environment or to human health will be identified. The results of the investigation will be summarized and presented to DER. If appropriate, recommendations for further evaluation, including assessment of ground-water quality, will be made. This would be conducted as Phase III and may include installation of monitoring wells in the primary settling pond area and/or sludge drying bed area.

SCHEDULE

Review of the bag plant wastewater discharge history and analysis of the inks can be completed and forwarded to DER within 30 days of DER approval of Phase I. Once DER has approved the Phase II investigation, sampling and analysis of results can be completed and the results forwarded to DER within 60 days.