ENGINEERING REPORT

AFTA CHEMICAL CORPORATION

1735 EXPRESS DRIVE NORTH

HAUPPAUGE, NEW YORK

OCTOBER 1979

PREPARED BY

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CONSULTING ENGINEERS

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DESCRIPTION

The Afta Chemical Corporation manufacturers a line of many products at its plant at 1735 Express Drive North, Hauppauge.

The production of all items takes place in two separate areas of the plant. Due to the diverse nature of the products, a specific profile of the wastes generated in the manufacturing processes is not possible. Nor would a specific profile be of value since it would reflect only the day's production. Afta Chemical produces a wide range of products to the order of and packaged under the label of many other companies. It cannot anticipate the scope or pattern of such orders.

On the basis of the production areas in the plant, the waste streams can be generally identified as:

(1) organic solvents largely alcohols and chlorinated hydrocarbons

(2) biodegradable liquids and sludges.

For the purposes of treatment and disposal, both these streams are separated.

The company is expanding its physical plant. An addition has been constructed for inventory storage primarily. The solvent process line is to be moved into this new structure. The production area generating biodegradable waste remains in its present location.

PROPOSED TREATMENT AND DISPOSAL

In addition to the two waste streams already identified, one additional waste stream develops from the floor cleaning of the mixing room for the process line producing the biodegradable liquid and sludges. This waste stream is believed to be of low strength and able to meet discharge standards.

The two major waste streams are to be held in storage and transported off site for approved disposal.

SOLVENT WASTE STREAMS

Products using solvents, alcohols and other volatile substances are manufactured in a strictly delineated area as a precaution to keep them from inadvertently mixing with the other product line. The items range from spot cleaners, tile cleaners, tire and fabric cleaners to after-shave lotions and perfumes. Production in this area is characterized by proportioning and mixing of components prepared elsewhere and shipped to Afta in containers. These materials are kept in inventory in proximate location to the process line. Certain liquids, such as trichloroethane and methanol, are stored in bulk in above-ground tanks exterior to the building. The transfer pump serving these tanks shall be secured in a sealed container with a locked cover.

There is one floor drain for the area where the solvent process line is located. This is the only drain in the area.

By the nature of the production process, no liquid waste of any kind is expected. What waste is or could be produced will be a consequence of accident - spillage or breakage.

The volume of such accidents have been minimal in past production. Estimates of past quantities produced are without value. The presence of such materials in the site dry wells has amply demonstrated that spillage on some occasion has occurred. There is not sufficient knowledge of these materials' behavior when loose in the environment to make a reasonable assessment of the scale and frequency of the accidents which left a residue in several of the drywells.

One line of inquiry might examine the possibility that the drywell bottoms act as a trap collecting the contaminants from the passing runoff. After a period of years, the accumulation would give impressive levels of contamination. Potentialy, surface adhesion makes the surrounding sand a filter.

Afta Chemical proposes to eliminate all chance of escape into the environment of the liquid waste of this process line by sleeving the floor drain piping and storing the waste in a 1200-gal. four-wall comparment as shown on the accompanying plans. The most reasonable calculations indicate a 1200-gal. volume represents more than 1 years accumulation of such waste. In the event the estimate is shown to be optimistic, the frequency of removal will be increased.

An approved scavenger will remove the liquid from the holding tank for appropriate disposal off site. In addition to occasional visual inspection, an indicator alarm has been provided. The liquid level sensor will activate an alarm once 80% of the tank has filled.

Preco's "Rockweld C", a waterproof structural adhesive, has been applied to the inside surfaces of both concrete tanks providing four-wall leakproof protection.

BIODEGRADABLE LIQUIDS AND SLUDGES

Beauty liquids, face creams, body powder and oils, eye shadow and the full range of cosmetic preparations are produced in this process area. Again, a tremendous inventory of compounds are used in these preparations. However, these materials are all natural oils and essences. They are combined in small batches for limited production runs.

The waste streams and sludges are a consequence of cleaning the various batching and mixing tanks.

It is proposed to steam clean these mixers. If successful, the steam cleaning will produce a highly concentrated, low volume waste per cleaning. If unsuccessful, the mixers will be first hand scraped and rinsed in boiling water. The consequence will be a high volume, low concentrate waste. Whichever waste is produced will depend on the susceptibility of the mixed material to steam and/or the industriousness of those doing the cleaning.

A 10,000-gal. double wall holding tank has been provided for this waste stream. An approved scavenger shall remove the waste off site for disposal. The frequency of removal will depend on the success of the cleaning operation.

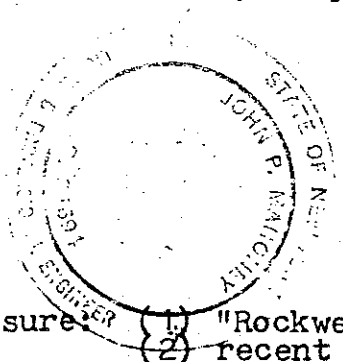
Piping from the mixers to the holding tank will be by a separate system installed above the floor to assure separation of wastes.

MIXING ROOM FLOOR CLEANING WASTE

Normal cleaning and flushing of the floor in the mixing room will continue as is presently the case. This waste moves by separate drain to a leaching pool with a manhole cover to grade for access and inspection.

The level of waste in this stream should be below discharge standards. A sampling program to monitor the level of contamination will give notice if better management of the floor cleaning operation is required.

Cooling waters circulated in a closed system in the mixer walls are discharged into the roof drywell which has a frame and grate for easy inspection.



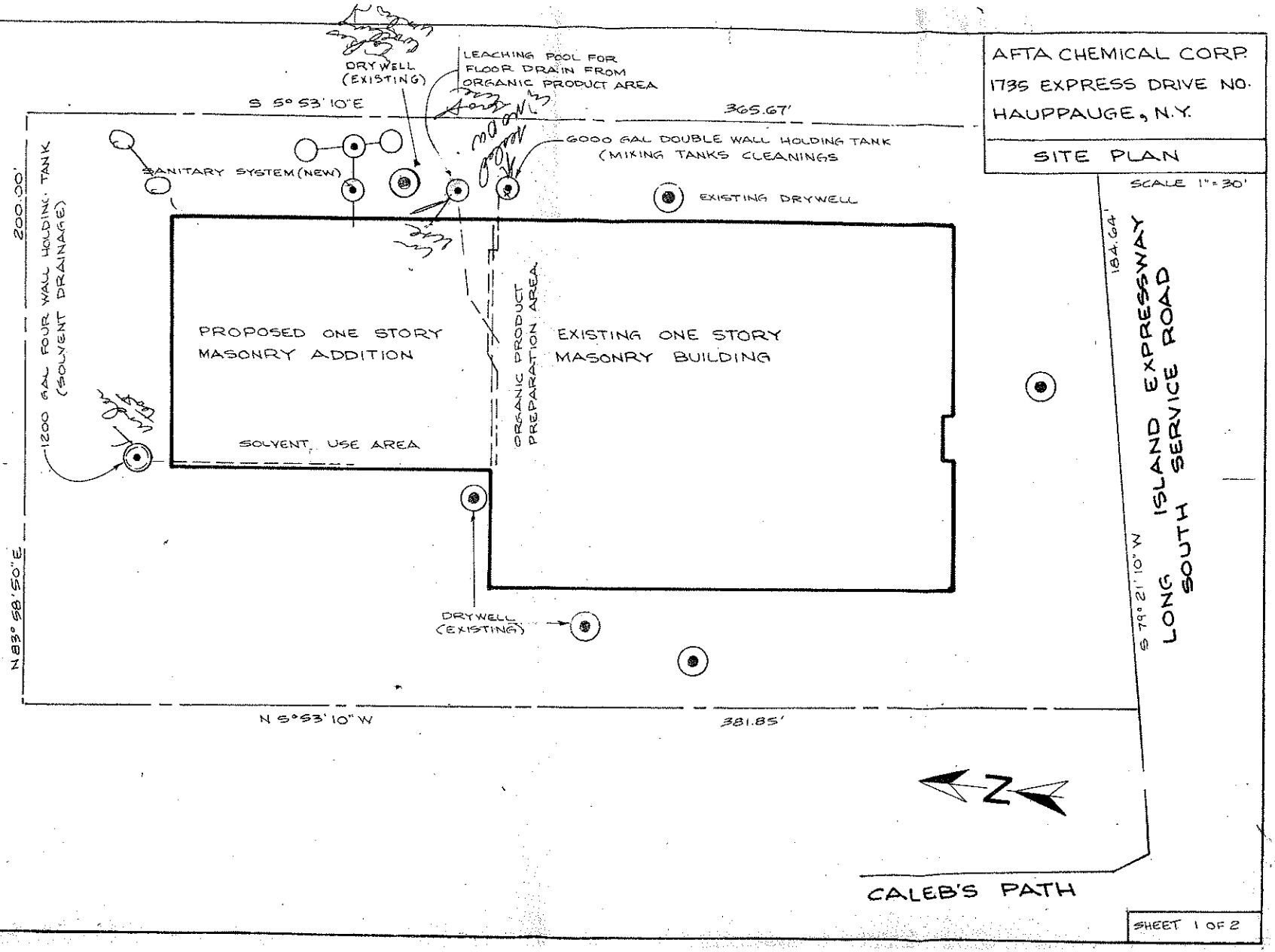
John P. Mahoney
Consulting Engineer

Enclosure:
(1) "Rockwell C" specification
(2) recent inventory of compounds and chemicals
(3) site plan
(4) tank details

AFTA CHEMICAL CORP.
1735 EXPRESS DRIVE NO.
HAUPPAUGE, N.Y.

SITE PLAN

SCALE 1" = 30'



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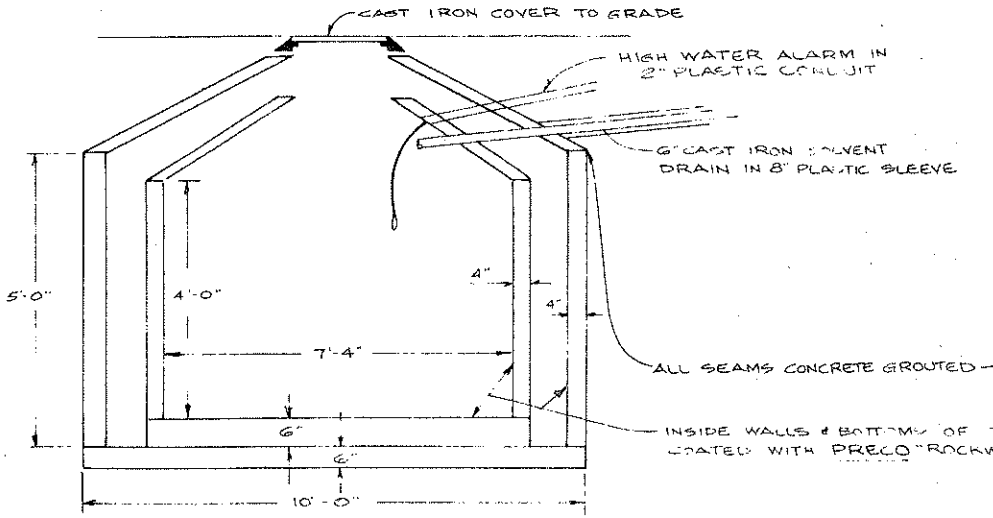
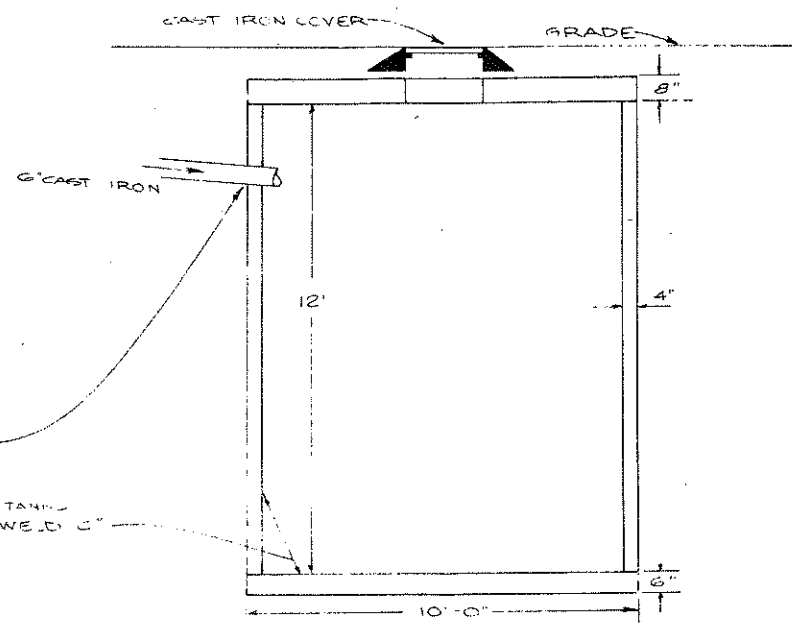
HOLDING TANK DETAILS



1200 GAL. HOLDING TANK

(FOUR WALL FOR SOLVENT USE PRODUCT WASTE)



1200 GAL. HOLDING TANK

- DOUBLE WALL FOR ORGANIC PRODUCT TANK CLEANOUT
- NOTE LITERATURE ON ROCKWELD C INCLUDED IN REPORT