Certification Report

Ground Water Collection and Treatment System Installation

Former GE Court Street Building 5/5A Site Town of DeWitt, New York

Lockheed Martin Corporation
Syracuse, New York

March 1998
Revised May 1998

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

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Syracuse, New York, 13214-0066
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1. Introduction

1.1 Purpose and Scope

This certification report documents the construction activities completed by Lockheed Martin Corporation (LMC) in connection with the ground water collection and treatment system interim remedial measure (IRM) at the former General Electric Company (GE) Court Street Building 5/5A site (Registry No. 734070) located in the Town of DeWitt, Onondaga County, New York. The ground water collection and treatment system IRM was undertaken by LMC pursuant to an Order on Consent (Index No. D7-0001-96-05) with the New York State Department of Environmental Conservation (NYSDEC), effective June 11, 1996. The design, installation, and operation of the ground water collection and treatment system is described in the NYSDEC-approved IRM Work Plan prepared by EMCON, dated August 1997, revised November 1997.

This Certification Report is organized as follows:

Section 1.0 - Introduction: This section presents the purpose and scope of the Certification Report and pertinent background information.

Section 2.0 - Summary of Field Activities: This section presents a summary of the activities completed as part of the ground water collection and treatment system project, including design, installation, and startup of the ground water collection and treatment system.

Section 3.0 - Certification Statement: This section presents a certification statement indicating that the field activities were completed in general conformance with the IRM Work Plan.

1.2 Involved Parties

The ground water collection and treatment system was designed by EMCON and the design was reviewed and approved by the NYSDEC. Through the submittal review and approval process, EMCON also provided approval of substantive field changes.

LMC retained O'Brien and Gere Technical Services, Inc. (OBG Tech.) to construct the system. LMC retained Blasland, Bouck & Lee, Inc. (BBL) to provide full time construction observation of the construction project to assess conformance with the IRM Work Plan. OBG Tech. was also responsible for securing requisite permits, including a building permit and certificate of occupancy, from the Town of DeWitt. Laidlaw Environmental Services, Inc. (Laidlaw) provided waste characterization, transportation and disposal.

In addition to providing review and approval of the IRM Work Plan, construction drawings and technical specifications, the NYSDEC conducted periodic site visits during installation of the system to monitor construction progress.

1.3 Background Information

In 1991, GE initiated an assessment of the former GE Court Street Building 5/5A site in anticipation of the termination of the property lease. The purpose of this assessment was to identify potential environmental impacts related to historic GE operations. Among the findings of the assessment was the former presence of nine underground storage tanks used to dispense virgin solvents and thinners and a solvent storage pad. Subsurface investigations performed in 1992 indicated that volatile organic compound (VOC)- impacted soil and ground water were present at the former GE Court Street Building 5/5A site. This investigation further indicated that the primary

source area of VOCs was located along the western property boundary adjacent to Building 5. The investigation concluded that ground water impacts were limited to the shallow ground water. In response to the findings, IRMs were completed to address VOC-impacted soil and ground water. In 1992, VOC-impacted soils were removed for off-site disposal in an effort to remove the source of VOCs. To control the off-site transport of VOC-impacted ground water, sections of the storm sewer system were modified in 1992, 1993 and 1997 to prevent the infiltration and discharge of impacted ground water.

In 1993, a Remedial Action Plan (RAP) and RAP Addendum (Wehran - New York, Inc., March 1993 and October 1993, respectively) were developed, based on the results of the previous subsurface investigations. The RAP alternative selected to address the off-site migration of impacted ground water was to collect and treat ground water on-site. This RAP in combination with the previous soil removal (the source), was proposed to reduce the volume of VOCs in the site soil and ground water and control the migration of impacted ground water.

LMC entered into an Order on Consent with the NYSDEC in June 1996, and pursuant to the Order, LMC has completed the construction of the ground water collection and treatment system.

2. Summary of Field Activities

2.1 General

The ground water collection and treatment system IRM at the former GE Court Street Building 5/5A site was completed in general conformance with the IRM Work Plan (EMCON, November 1997), and the Site Operations Plan (SOP) prepared by OBG Tech (OBG Tech., 1997). Several design and field changes were incorporated during the system construction. These changes are described herein and are presented on the record drawings included in Attachment 1. Construction photographs are included in Attachment 2.

Operation of the ground water treatment system requires the discharge of treated ground water and untreated process air. LMC obtained water and air effluent discharge approvals and water effluent limitations from the NYSDEC. A copy of the NYSDEC issued water effluent limitations are presented in Attachment 3.

Permits required for the construction of the system and occupation of the ground water treatment building, including a Town of DeWitt Building Permit and Certificate of Occupancy, were obtained by OBG Tech. A copy of these permits is included in Attachment 4.

2.2 Description of Field Activities

2.2.1 Site Mobilization and Preparation Activities

Site mobilization and preparation activities were completed in general conformance with the NYSDEC-approved IRM Work Plan and SOP.

The alignment of the collection trench (including associated cleanouts) and the force main trench and the location of the collection sump and the treatment building were surveyed and located by C.T. Male Associates, P.C. as shown on the NYSDEC-approved construction drawings.

The alignment of the ground water collection trench was cleared of trees and vegetation, as needed for equipment access and installation of the trench. Removed materials were chipped and were used on-site during the backfill and site restoration activities, described below. Following the clearing activities and prior to beginning the trench installation, a silt fence was installed between the trench alignment and the South Branch of Ley Creek to control the migration of silt towards the creek.

Two temporary soil staging areas were established within the parking lot area north of Building 5 to allow for the segregation of any soils which contained detectable concentrations of VOCs or visual impacts. The staging area for soils exhibiting detectable concentrations of VOCs (based on field screening) was constructed of 40 mil HDPE placed directly on the asphalt. The perimeter of the staging area was bermed to contain runoff from the staged soils and catch basins within the work area were covered with silt fence and surrounded with hay bales to control the discharge of silt into the storm sewer system. The soil staging area was used during construction to contain soils excavated from the parking lot area of the site and soils which exhibited detectable VOC concentrations during field screening. Staged soils were covered with polyethylene sheeting daily. The handling and disposal of collected stockpiled soils is discussed below.

2.2.2 Ground Water Collection System Installation

The ground water collection system, consisting of the force main trench, the collection sump and the collection trench, were installed in general conformance with the IRM Work Plan and SOP. Substantive modifications to the collection system are described below and are shown on the attached record drawings.

Ground Water Collection Trench

Pursuant to the design, approximately 830 feet of ground water collection trench was installed. The depth of the ground water collection trench ranges from approximately nine to 12.5 feet below ground surface. As the excavation reached the required depth, a geotextile fabric was installed at the base of the excavation to provide stability to the underlying soft soils during construction. A 4-inch diameter, perforated PVC well screen with 0.01-inch wide perforations on 0.25-inch centers was installed as the ground water collection and conveyance pipe. The collection pipe was installed over 6-inches of concrete sand and was backfilled with concrete sand to a minimum depth of 2 feet over the collection pipe. Pursuant to the design, the depth of concrete sand was increased in sections of the collection trench where thicker or additional sand lenses were encountered. As shown on the record drawings and in accordance with the IRM Work Plan, the depth of concrete sand was increased, ranging from 4 to 5 feet above the collection pipe, along an approximately 140 foot section of collection pipe to intercept an identified sand lense. The portion of collection trench located outside of the former fence line was backfilled with excavated soils. Because soils excavated from the parking lot area of the site were segregated for off-site disposal, the portion of collection trench located within the parking lot was backfilled with imported run-of-bank fill. Backfilled materials were compacted to a minimum of 85% of the maximum dry density. Cleanouts were installed along the collection trench at the specified locations. The cleanouts were capped, locked and covered at grade with a curb box.

During excavation activities, soils were screened with a photoionization detector (PID) to assess the presence or absence of VOCs. Approximately 8 cubic yards of soil excavated near the northwest corner of Building 5 contained detectable concentrations of VOCs. Pursuant to the SOP, soils with detectable concentrations of VOCs were segregated and stockpiled in the lined staging area for subsequent characterization and off-site disposal (discussed below). No other soils were identified as containing detectable PID readings. Soils which were excavated from areas outside of the parking lot area and which did not exhibit detectable concentrations of VOCs were used as backfill. Water which accumulated in the ground water collection trench was collected and placed in portable steel 21,000-gallon tanks for characterization. Handling of collected water and segregated soils is described further below.

Ground Water Collection Sump

Pursuant to the system design, a 4-foot diameter HDPE ground water collection sump (i.e., manhole) was installed at the downgradient end of the ground water collection trench. Ground water from the collection trench drains via gravity to the collection sump; ground water is pumped from the sump to the ground water treatment system.

The IRM Work Plan specified use of a HDPE manhole with fabricated wall penetrations. A concrete anti-buoyancy anchor (approximate dimension 7-feet by 7-feet by 2-1/4 feet thick) was cast-in-place around the base of the manhole. Because of construction difficulties associated with ground water infiltration into the sump excavation, the installed sump elevation was approximately 14-inches higher than the design elevation. In order to maintain the elevation of the ground water collection trench influent line, a new 4-inch inlet penetration was installed in the manhole approximately 14-inches below the prefabricated penetration. The prefabricated wall penetration was sealed and the top of the manhole was trimmed to match the surrounding ground surface. The excavation immediately surrounding the sump was backfilled with imported run-of-bank fill and the remaining excavation was

backfilled with soil from the excavation. The collection sump was finished at grade with a 5-foot diameter concrete manhole barrel section and slab top with an access hatch. This change will not affect the operation of the ground water collection and treatment system.

The submersible pumps and electrical controls were installed in the collection sump in general conformance with the design.

Force Main Trench

Pursuant to the IRM Work Plan, the force main trench extends from the ground water treatment building to the ground water collection sump. Pursuant to the design, the force main trench contains: two 2-inch diameter HDPE force mains to convey collected ground water from the sump to the treatment system; one 4-inch diameter HDPE gravity effluent line for the discharge of treated ground water; three PVC electrical conduits (1-inch, 1¼-inch and 2 ½-inch diameters); and a 1-inch diameter potable water line. The installed conditions of the force main trench are shown on the attached record drawings. The Town of DeWitt required separation distances between the potable water line and the influent forcemains (i.e., 18-inch horizontal and 15-inch vertical separation). The required burial depth for the potable water line, necessitated that the force main trench be installed approximately 6-inches deeper than the elevation indicated on the design drawings. The force main trench was backfilled with imported run-of-bank fill and compacted to at least 85% of the maximum dry density. This change will not affect the operation of the ground water collection and treatment system.

All soils which were excavated as part of the force main trench were staged on-site in the lined staging area for characterization and off-site disposal. In addition, all water which entered the excavation was collected and stored on-site in portable steel 21,000-gallon storage tanks for characterization. Handling of collected construction water and excavated soil are discussed further below.

Utility Installation

Pursuant to the IRM Work Plan, the following utilities were installed at the site: electrical service; telephone service; and potable water service. Except for the changes summarized below, the utilities were installed in general conformance with the IRM Work Plan.

Niagara Mohawk installed the electrical service from an existing connection at Deere Road. Niagara Mohawk installed two utility poles adjacent to the north property line and connected the electrical service to a third utility pole installed by OBG Tech. near the collection sump. Electrical service was provided to the collection sump and the treatment building (through the force main trench) pursuant to the design.

The telephone service conduit was installed inside Building 5 as opposed to the outside of Building 5. The relocation of the telephone service will not affect the operation of the ground water collection and treatment system.

In lieu of the potable water connection shown on the design drawings, the Town of DeWitt water department provided a potable water connection from an existing 12-inch water main, located north of the asphalt parking lot, to the property line. OBG Tech. installed a potable water line from the Town of DeWitt connection through the force main trench to the treatment building. This change will not affect the operation of the ground water collection and treatment system.

2.2.3 Treatment Building Construction

Pursuant to the design, a pre-engineered metal building was constructed on a concrete foundation. The building is used to house all treatment equipment and provides access for maintenance and future equipment installations. With the exception of the concrete floor elevation, the treatment building was installed in general conformance with the IRM Work Plan. During the installation of the concrete foundation, it was determined that a significant amount of storm water, from a roof drain system, discharged to the ground near the treatment building. Because the designed finished floor elevation was flush with the surrounding grade, the potential for flooding of the treatment building existed. To eliminate the potential flooding due to storm water runoff into the building, the finished elevation of the floor was raised by 6-inches. Treatment system elevation changes were made as needed to accommodate the raised floor elevation. This change will not affect the operation of the ground water collection and treatment system.

2.2.4 Ground Water Treatment System Installation

The primary components of the ground water treatment system, including the diffused aeration system, bag filter system and electrical control system were installed in general conformance with the design.

Although no changes were made to the treatment system components, several equipment changes were incorporated into the ground water treatment system during construction. Significant equipment changes included the installation of a Carbtrol Corporation air stripper and upgrading the Operator Interface Terminal to allow for monitoring of all analog signals, and the control of all set points, and the manipulation of the bag filter valving. The equipment changes resulted in several changes in the piping arrangements. The conditions of the ground water treatment system are shown on the attached record drawings. All equipment changes were reviewed and approved by the design engineer, EMCON. The equipment changes are not expected to adversely affect the operation of the ground water collection and treatment system.

Pursuant to the design, the treatment system effluent flows by gravity via an existing 4-inch effluent line (installed within the force main trench) to storm sewer catch basin CB-20. The receiving water is Sanders Creek (Water Index No. P 154-3-3).

The piping components of the ground water collection and treatment system were pressure tested following installation; all piping achieved the testing criteria established in IRM Work Plan.

2.2.5 Waste Handling and Disposal

Segregated Soil

A total of 1,996 tons (approximately 1,440 cubic yards) of excavated soils (primarily from the parking lot area of the site) were staged on-site for characterization and off-site disposal. At the completion of the excavation activities, Laidlaw collected and analyzed composite samples of the stockpiled soils. Based on the analytical data, all soil was characterized as non-hazardous waste. The soil sample characterization laboratory analytical results are included as Attachment 5. Stockpiled soils were transported off-site on December 8, 9 and 29, 1997 for disposal as non-hazardous waste at the Seneca Meadows Landfill located in Waterloo, New York. The stockpile area construction materials (i.e., HDPE liner and hay bales) were disposed of with the removed soil.

Dewatering

OBG Tech. performed dewatering activities throughout the duration of the trench and building excavation activities in conformance with the IRM Work Plan and SOP. All water generated during the dewatering activities was stored on-site in nine portable 21,000-gallon steel storage tanks, sampled, analyzed, treated and/or disposed.

After each tank was filled, a discrete water sample was collected and analyzed to determine if the collected construction water met the NYSDEC-established effluent limitations for the site. A summary of the analytical results from the collected construction water samples is included on Table 1. Copies of the laboratory analytical reports are included in Attachment 6. As shown on Table 1, samples from two of the nine storage tanks indicate that the collected construction water was below all effluent limitations. Thus, with NYSDEC approval, water from those tanks was discharged to Sanders Creek without treatment, via catch basins CB-3 and CB-20. Water contained in the remaining seven tanks exceeded one or more of the effluent discharge limitations. Thus, in accordance with the IRM Work Plan, water from those tanks was treated and discharged through the on-site ground water treatment system during Phase I system startup.

Laboratory analysis of the water sample collected from Tank ID. S1391SD identified the presence of acetone and 2-butanone which are not included on the list of site specific effluent discharge limitations. These identified VOCs have not previously been detected at the site and are not considered site-related. The presence of these VOCs is believed to be related to the nearby renovation of Building 5 where solvent welding was being used during the installation of new PVC roof drains. Storm water flow from these newly installed roof drains was observed entering the treatment building excavation and was pumped into the storage tank containing collected construction water. In addition, several exceedances of the effluent discharge limitations were also identified in Tank ID. S1391SD. Thus, in accordance with the IRM Work Plan, water from Tank ID. S1391SD was treated and discharged through the on-site ground water treatment system during Phase I system startup.

2.2.6 Site Restoration and Demobilization Activities

OBG Tech. restored areas disturbed during site activities to their prior condition according to the IRM Work Plan. Site restoration in the area of the ground water collection trench included grading the area to match the surrounding grades and placing approximately 3-inches of run of bank gravel along portions of the Onondaga County access road which were disturbed during construction. Wood chips generated from the clearing and chipping operation will be used during the site restoration operations as mulch. The restored area along the ground water collection trench will be seeded during the spring of 1998. The disturbed asphalt areas were backfilled with crushed stone to match the surrounding grade. The asphalt will be repaired in the spring of 1998.

2.3 System Startup

OBG Tech. programmed the logic controller and tested all pumps, pipes, and other equipment as required prior to startup. Potable water was used to determine system operability, then ground water collected during the system installation was introduced to the system. Phase I of the system startup was conducted from January 26, 1998 to February 11, 1998; Phase II of the system startup was conducted from February 11, 1998 to February 16, 1998; and normal system O&M commenced on February 16, 1998 in accordance with the O&M Plan. Initial analytical data for the system influent and effluent indicate that the system is operating effectively and is meeting NYSDEC-established effluent limitations. Analytical data obtained during the system startup and normal O&M will be provided to the NYSDEC in the Monthly Progress Reports.

3. Certification Statement

I, Edward R. Lynch, P.E., the Blasland, Bouck & Lee Inc. Project Officer for the Interim Remedial Measures Ground Water Collection and Treatment Project for the former GE Court Street Building 5/5A site (Project), certify that, to the best of my knowledge based upon information provided by a person directly under my supervision who inspected the work, the execution of the Project located in the Town of DeWitt, Onondaga County, New York was performed in substantial conformance with the New York State Department of Environmental Conservation-approved Work Plan entitled *Interim Remedial Measures Work Plan* prepared by EMCON, dated August 1997 and revised November 1997, and the Construction Drawings and Technical Specifications prepared by EMCON, dated August 1997.

Edward R. Lynch, P.E.
NYS License No. 57526

Blasland, Bouck & Lee, Inc.
6723 Towpath Road
Syracuse, NY 13214

Table 1

Summary of Analytical Results

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Table 1
Summary of Analytical Results Groundwater Collected by Dewatering Activities
Former GE Court Street Building 5/5A
Groundwater Treatment and Collection System

Parameter	Unit	Tank Permit	1	2	3	4	5	6	7	8	9
Flow	gpm	10	NA	NA	NA	NA	NA	NA	NA	NA	NA
pH	SU	6.0-9.0	7.6	7.3	8.5	7.85	**10.4**	7.52	7.74	7.77	7.64
TDS	mg/L	monitor	325	270	267	310	240	570	420	330	470
Metals											
Arsenic	mg/L	0.03	0.002	0.003	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
Chromium	mg/L	0.025	0.01	0.01	< 0.01	< 0.01	0.045	<0.005	<0.005	<0.005	< 0.005
Copper	mg/L	0.03	< 0.02	**0.04**	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01
Iron	mg/L	1.7	0.52	**1.9**	**1.7**	< 0.01	0.11	1.1	< 0.05	0.19	0.15
Lead	mg/L	0.02	< 0.003	0.007	< 0.003	< 0.003	< 0.003	< 0.0015	< 0.0015	< 0.0015	< 0.0015
Nickel	mg/L	0.025	< 0.01	< 0.01	< 0.04	< 0.04	< 0.04	< 0.02	< 0.02	< 0.02	< 0.02
Selenium	mg/L	0.01	0.001	< 0.001	<0.005	<0.005	<0.005	<0.0025	<0.0025	<0.0025	< 0.0025
Silver	mg/L	0.01	**0.03**	**0.03**	< 0.01	< 0.01	< 0.01	<0.005	<0.005	<0.005	< 0.005
Thallium	mg/L	0.015	< 0.003	< 0.003	< 0.01	< 0.01	< 0.01	<0.005	<0.005	<0.005	< 0.005
Vanadium	mg/L	0.03	**0.08**	**0.08**	< 0.003	< 0.003	< 0.003	< 0.0015	< 0.0015	< 0.0015	< 0.0015
Zinc	mg/L	0.4	0.01	0.08	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01
VOCs											
Vinyl Chloride	mg/L	0.05	**0.11**	0.044	**0.17**	< 0.01	< 0.01	0.028	0.007	< 0.01	0.012
Chloroethane	mg/L	0.17	< 0.003	< 0.003	< 0.01	0.034	0.016	< 0.01	0.006	0.016	< 0.01
1,1-DCA	mg/L	0.03	**0.13**	**0.11**	**0.14**	**0.056**	0.01	**0.068**	0.025	**0.036**	0.029
1,2-DCE	mg/L	0.03	< 0.003	**0.12**	**0.25**	**0.047**	0.012	**0.038**	0.023	0.025	0.018
1,1,1-TCA	mg/L	0.01	0.008	0.006	0.009	**0.01**	< 0.005	< 0.005	0.004	0.008	< 0.005
TCE	mg/L	0.01	< 0.003	< 0.003	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.001	< 0.005
Benzene	mg/L	0.006	< 0.003	< 0.003	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Toluene	mg/L	0.01	0.005	**0.021**	**0.019**	< 0.005	0.007	< 0.005	< 0.005	< 0.005	< 0.005
Ethylbenzene	mg/L	0.01	0.006	< 0.003	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Xylenes	mg/L	0.01	0.006	0.003	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Acetone	mg/L	none	NS	NS	0.08	NS	NS	NS	NS	NS	NS
2-Butanone	mg/L	none	NS	NS	0.025	NS	NS	NS	NS	NS	NS

Notes:
NA - Not Applicable
NS - No Sample
Exceedences of permitted concentrations are shown in bold text

Attachment 1

Record Drawings

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

N

N 5000

N 4500

N 4000

N 3500

E 5500

E 5000

DEERE ROAD

EXISTING NIAGARA MOHAWK POWER POLE

EXISTING UTILITY POLE

PZ-1

CSP BUILDING 5A

MW-5S

MW-5D

CB-6

CB-9

METAL GARAGE

CB-10

FORMER METAL SHED

CB-7

CB-8

CB-5

CB-1

MH-55

MH-54

MH-53

MW-12

OF-02

CREEK (SOUTH BRANCH)

NEW NIAGARA MOHAWK POWER POLE

EXISTING 27" SANITARY SEWER

NEW 1/2" DIA. TELEPHONE CONDUIT RUN ALONG TOP OF CEILING BEAM

CSP BUILDING 5

EXISTING 12" WATER MAIN

EXISTING CONCRETE WATER METER PIT

NEW NIAGARA MOHAWK POWER POLE

SEE DETAIL OF THIS AREA THIS SHEET

FORMER SOLVENT PAD

NEW HDPE PUMP STATION MANHOLE (RIM EL.= 379.48)

NEW POLE FOR POWER METER, BY CONTRACTOR

NEW INFLUENT LINES

NEW 4" EFFLUENT LINE

MW-3S

MW-3D

NEW 1" SERVICE TAPPED INTO 12" FORCE MAIN (CURB BOX)

CB-2

NEW TREATMENT BUILDING

FORMER UST LOCATION

45° FITTING

CB-3

CB-20

MW-6D

B-36

OF-01A

MW-16D

MW-16S

CB-4

B-32

CLEANOUT RISER

22° FITTING

MW-8S

MW-11

MW-18D

MW-18S

B-33

4+00

MW-9

MW-10

45° FITTING

MH-52

FLOW

LOCATION OF NEW GROUNDWATER COLLECTION SYSTEM TRENCH

22° FITTING

MW-17D

MW-17S

CLEANOUT RISER

MH-51

ROUTE 298

SANDERS CREEK

AS-BUILT PIPELINE ROUTE AND BUILDING LOCATION BY C.T. MALE ASSOCIATES, P.C. - 1/28/98

LEGEND:

- EXISTING MONITORING WELL
- EXISTING PIEZOMETER
- EXISTING STORM DRAIN CATCH BASIN
- EXISTING STORMWATER OUTFALL
- EXISTING SANITARY SEWER MANHOLE
- EXISTING STORM SEWER LINES
- EXISTING GAS LINES
- EXISTING 12" WATER MAIN
- ABANDONED STORM SEWER LINES
- SANITARY SEWER LINE
- SOIL BORING
- FENCE
- NEW YARD PIPING (COLLECTION TRENCH, INFLUENT/EFFLUENT LINES)
- NEW OVERHEAD LINE ELECTRICAL
- NEW UNDERGROUND ELECTRICAL LINES
- NEW OVERHEAD TELEPHONE SERVICE
- NEW WATER SERVICE
- DETAIL NUMBER
- DRAWING NO. WHERE DETAIL APPEARS
- DRAWING NUMBER DETAIL IS REFERENCED

PARTIAL PLAN

N.T.S.

NEW 1/2" DIA. TELEPHONE CONDUIT RUN ALONG TOP OF CEILING BEAM
NEW POLE FOR POWER METER, BY CONTRACTOR
NEW INFLUENT LINES
NEW 4" EFFLUENT LINE
MW-3S
MW-3D
CB-2
CB-3
CB-20

1" 1/2" 0"

ø 6ø 12ø

SCALE IN FEET

X: (SEE SIDE)
P: EMCON
3/30/98 SYR-54-RLP
38158001/AS-BUILT/MALMSC-6.DWG

To the best of my knowledge and belief, and based upon the representations of representatives of Blasland, Bouck & Lee, Inc., and O'Brien and Gere Technical Services, Inc., these record drawings reflect as-built conditions of the groundwater collection and treatment system as constructed by O'Brien & Gere Technical Services, Inc. with construction oversight by Blasland, Bouck & Lee, Inc., as documented in the Certification Report (BB&L, March 1998) prepared for the system. EMCON has not prepared the record drawings, and has not field verified the actual construction. EMCON has compared these record drawings to mark-ups of the design drawings prepared by BB&L to document construction, photographs of the completed treatment system, and the Certification Report (BB&L, March 1998), and has confirmed the inclusion on these drawings of field changes and substitutions approved during construction by EMCON.

Mark A. Sawyka, P.E.
N.Y.P.E Lic. No. 64543

EMCON/Wehran-New York, Inc.

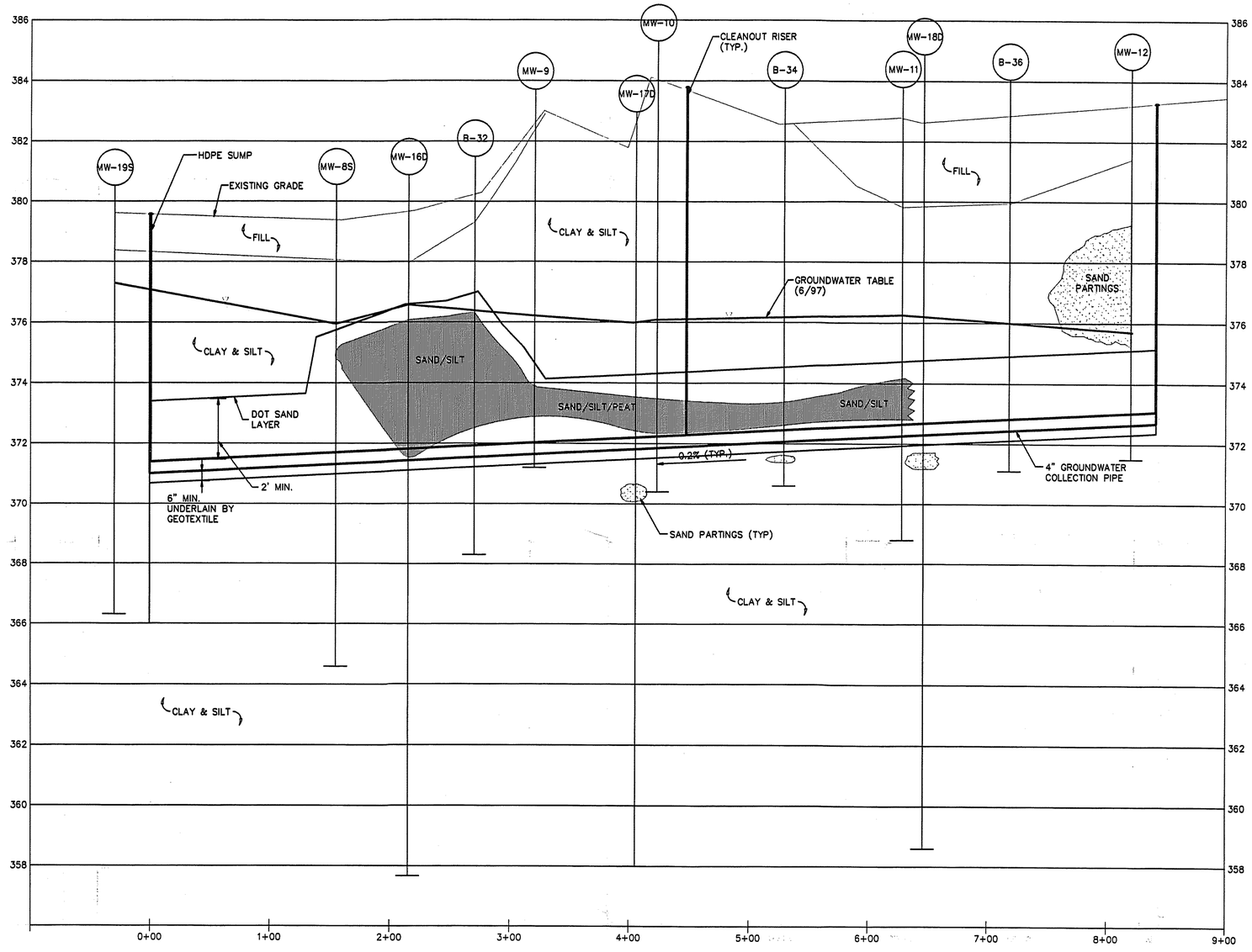
EMCON

LOCKHEED MARTIN CORPORATION
FORMER GE COURT STREET BUILDING 5/5A
TOWN OF DEWITT, NEW YORK

SITE PLAN

DRAWING NO. 1

PROJECT NO. 86143-003.000



NOTES:

1. EXISTING GRADE ELEVATION BASED ON ELEVATIONS RECORDED ON BORING LOGS.
2. BORING AND WELL LOCATIONS ARE PROJECTED TO TRENCH ALIGNMENT WHERE APPLICABLE.

1" 1/2" 0" 1"

X: (SEE SIDE)
P: EMCON
3/30/98 SYR-54-RLP
38158001/AS-BUILT/MALMP-01.DWG

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EMCON/Wehran-New York, Inc.

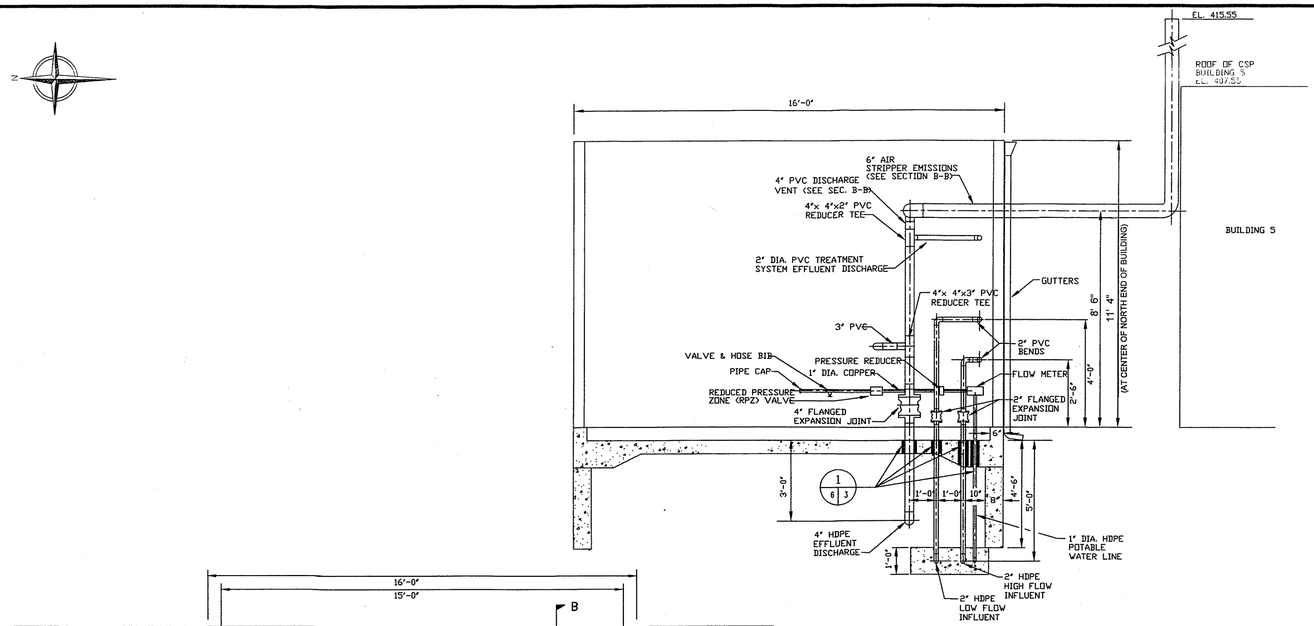
EMCON

LOCKHEED MARTIN CORPORATION
FORMER GE COURT STREET BUILDING 5/5A
TOWN OF DEWITT, NEW YORK

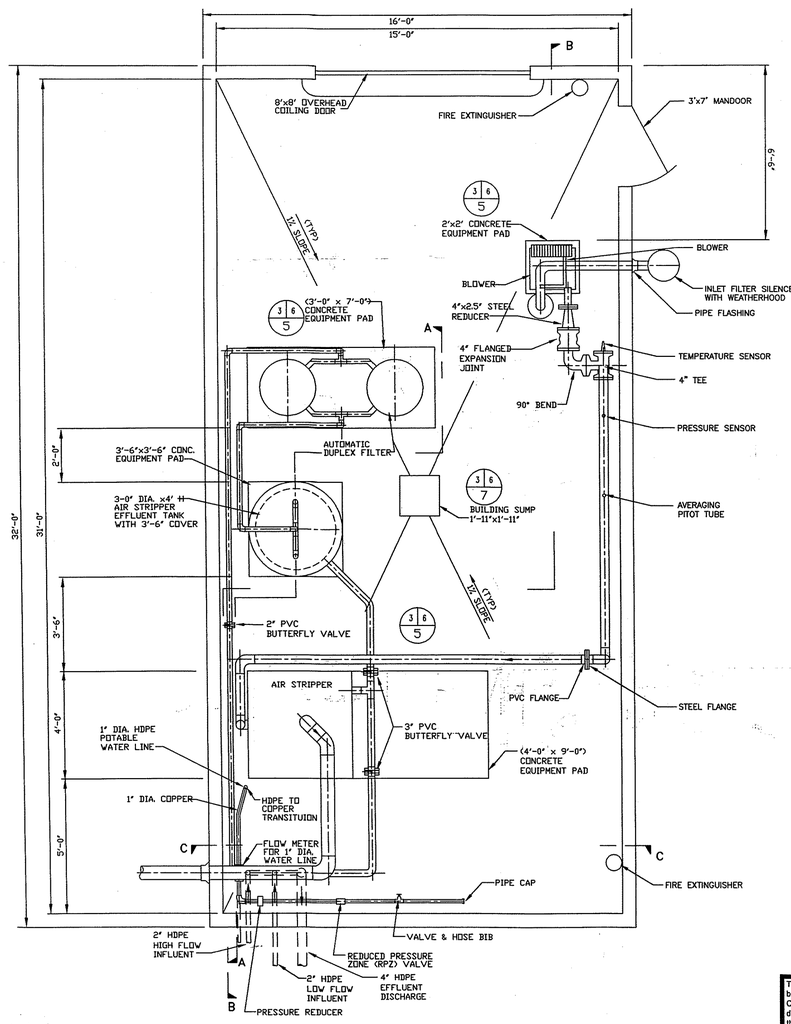
GROUNDWATER COLLECTION SYSTEM PROFILE

DRAWING NO. 2

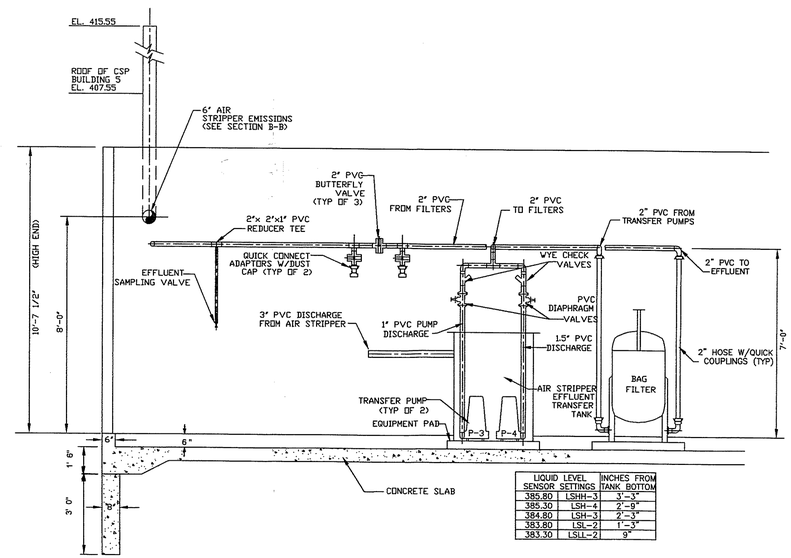
PROJECT NO. 36143-003.000



C 1 3 **SECTION**
SCALE: 3/8" = 1'-0"

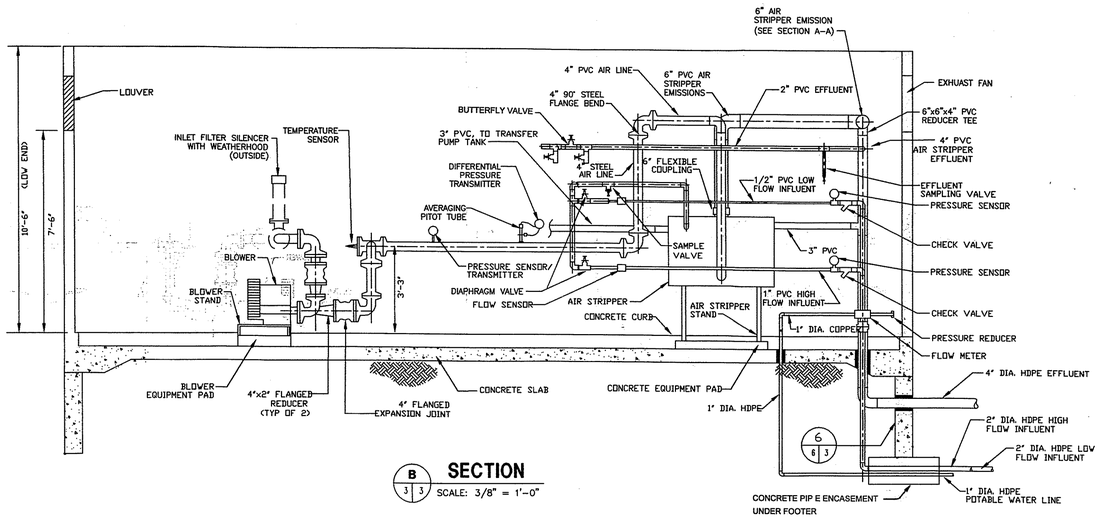


TREATMENT SYSTEM PLAN
SCALE: 3/8" = 1'-0"



LIQUID LEVEL SENSOR SETTINGS		INCHES FROM TANK BOTTOM
385.80	LSHH-3	3'-3"
385.30	LSH-4	2'-9"
384.80	LSH-3	2'-3"
383.80	LSL-2	1'-3"
383.30	LSLL-2	9"

A 3 3 **SECTION**
SCALE: 3/8" = 1'-0"



B 3 3 **SECTION**
SCALE: 3/8" = 1'-0"

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EMCON

LOCKHEED MARTIN CORPORATION
FORMER GE COURT STREET BUILDING 5/5A
TOWN OF DEWITT, NEW YORK

TREATMENT SYSTEM PLAN AND SECTIONS

DRAWING NO. 3
PROJECT NO. 86143-003.000

X: (SEE SIDE)
P: EMCON
3/30/98 SYR-54-RLP
38158001/AS-BUILT/ANEPL-01.DWG

1" 1/2" 0" 1"

Programmable Logic Controller (PLC-1)

Input	Input Description	Output	Output Description
I-1	Hand Switch (HS-1)	0-1	Hand - Turn P-1 On Off - Turn P-1 Off Auto - Enable P-1
I-2	Hand Switch (HS-2)	0-2	Hand - Turn P-2 On Off - Turn P-2 Off Auto - Enable P-2
I-3	Power Indicator (JI-1)	0-3	P-1 Running Light (RL-1)
I-4	Power Indicator (JI-2)	0-4	P-2 Running Light (RL-2)
I-5	High-High Level in Collection Sump (LSHH-1)	0-5A	Enable P-2
		0-5B	Alarm Light (LAH-1)
		0-5C	Auto Dialer Signal to Operator
I-6	High Level 2 in Collection Sump (LSH-2)	0-6A	Enable P-2
		0-6B	Disable P-1
I-7	High Level 1 in Collection Sump (LSH-1)	0-7A	Enable B-1
		0-7B	Enable P-1 (Time Delayed)
I-8	Low Level in Collection Sump (LSL-1)	0-8A	Disable P-1 and P-2
		0-8B	Disable B-1 (Time Delayed)
I-9	Low-Low Level in Collection Sump (LSLL-1)	0-9A	Disable P-1 and P-2
		0-9B	Alarm Light (LAL-1)
		0-9C	Auto Dialer Signal to Operator
I-1ø	High Air Stripper Lid Pressure (PT-4)	0-1øA	Disable P-1 and P-2
		0-1øB	Disable B-1
		0-1øC	Alarm Light (PAH-4)
		0-1øD	Auto Dialer Signal to Operator
I-11	High Air Stripper Water Level (LSHH-2)	0-11A	Disable P-1 and P-2
		0-11B	Disable B-1 (Time Delayed)
		0-11C	Alarm Light (LAH-2)
		0-11D	Auto Dialer Signal to Operator
I-12	Hand Switch (HS-3)	0-12	Hand - Turn B-1 On Off - Turn B-1 Off Auto - Enable B-1
I-13	Power Indicator (JI-3)	0-13	B-1 Running Light (RL-3)
I-14A	Blower Discharge Differential Pressure (DPT-1)	0-14	Air Flow Rate Calculation (Q)
I-14B	Blower Discharge Static Pressure (PT-3)		
I-14C	Blower Discharge Temperature (TT-1)		
I-15A and I-15B	Power Indication (JI-3) LOW AIR FLOW (Q < Qmin)	0-15A	Disable P-1 and P-2
		0-15B	Disable B-1 (Time Delayed)
		0-15C	Alarm Light (FAL-1)
		0-15D	Auto Dialer Signal to Operator
I-16	High Blower Pressure (P > PMAX)	0-16A	Disable P-1 and P-2
		0-16B	Disable B-1
		0-16C	Alarm Light (PAH-3)
		0-16D	Auto Dialer Signal to Operator
I-17	High Blower Temperature (T > TMAX)	0-17A	Disable P-1 and P-2
		0-17B	Disable B-1
		0-17C	Alarm Light (TAH-1)
		0-17D	Auto Dialer Signal to Operator
I-18	Hand Switch (HS-4)	0-18	Hand - Turn P-3 On Off - Turn P-3 Off Auto - Enable P-3
I-19	Hand Switch (HS-5)	0-19	Hand - Turn P-4 On Off - Turn P-4 Off Auto - Enable P-4
Input	Input Description	Output	Output Description
I-2ø	Power Indicator (JI-4)	0-2ø	P-3 Running Light (RL-4)
I-21	Power Indicator (JI-5)	0-21	P-4 Running Light (RL-5)
I-22	High-High Level in Air Stripper Clearwell (LSHH-3)	0-22A	Disable P-1 and P-2
		0-22B	Disable B-1 (Time Delayed)
		0-22C	Alarm Light (LAH-3)
		0-22D	Auto Dialer Signal to Operator

Programmable Logic Controller (PLC-1)

Input	Input Description	Output	Output Description
I-23	High Level 2 in Air Stripper Clearwell (LSH-4)	0-23A	Enable P-4
		0-23B	Disable P-3
I-24	High Level 1 in Air Stripper Clearwell (LSH-3)	0-24	Enable P-3
I-25	Low Level in Air Stripper Clearwell (LSL-2)	0-25	Disable P-3 and P-4
I-26	Low-Low Level in Air Stripper Clearwell (LSLL-2)	0-26A	Disable P-1,P-2,P-3 and P-4
		0-26B	Disable B-1 (Time Delayed)
		0-26C	Alarm Light (LAL-2)
		0-26D	Auto Dialer Signal to Operator
I-27	High Differential Pressure at Bag Filter F-1 (PLC2-0-3E)	0-27A	Alarm Light (DPAH-1)
		0-27B	Auto Dialer Signal to Operator
I-28	High Differential Pressure at Bag Filter F-2 (PLC2-0-4)	0-28A	Disable P-1 and P-2
		0-28B	Disable B-1 (Time Delayed)
		0-28C	Alarm Light (DPAH-2)
		0-28D	Auto Dialer Signal to Operator
I-29	High Pressure on Low Flow Influent (PT-1)	0-29A	Disable P-1 and P-2
		0-29B	Disable B-1 (Time Delayed)
		0-29C	Alarm Light (PAH-1)
		0-29D	Auto Dialer Signal to Operator
I-3ø	High Pressure on Low Flow Influent (PT-2)	0-3øA	Disable P-1 and P-2
		0-3øB	Disable B-1 (Time Delayed)
		0-3øC	Alarm Light (PAH-2)
		0-3øD	Auto Dialer Signal to Operator
I-31	Low Influent Flow Indicator & Totalizer (FT-1)		
I-32	High Influent Flow Indicator & Totalizer (FT-2)		
I-33	High-High Level in Building Sump (LSHH-4)	0-33A	Disable P-1 and P-2
		0-33B	Disable B-1
		0-33C	Alarm Light (LAH-4)
		0-33D	Auto Dialer Signal to Operator
I-34	Filter Differential Pressure (PLC-2 0-1)		

Duplex Filter Control Panel (PLC-2)

Input	Input Description	Output	Output Description
I-1	Differential Pressure at Bag Filter (DPT-2)	0-1	Monitor Differential Pressure
I-2	Setpoint Differential Pressure		
I-3	High Differential Pressure in Filter F-1 (DPT-2)	0-3A	Open Valve on Loop Pipe (M5)
		0-3B	Close F-1 Valves (M1 & M2)
		0-3C	Open F-2 Valves (M3 & M4)
		0-3D	Close Valve on Loop Pipe (M5)
		0-3E	Indicate Switchover
I-4	High Differential Pressure in Filter F-2 (DPT-2)	0-4	Indicates Both Filters Closed

LEGEND:

4-EFF-HDPE — PIPE SIZE STREAM-PIPE MATERIAL

EFF - EFFLUENT | HDPE - HIGH DENSITY POLYETHYLENE
GW - GROUNDWATER | PVC - POLY(VINYL) CHLORIDE
V - VENT | STL - STEEL

- PLC I — PROGRAMMABLE LOGIC CONTROL: I = INPUT, ø = OUTPUT
- LSHH I — PANEL MOUNTED INSTRUMENT
- FE I — FIELD MOUNTED INSTRUMENT
- R — CONTROL PANEL LIGHT: R = ALARM, G = RUNNING
- MOTOR STARTER
- PUMP (P) OR BLOWER (B)
- M 1ø — MOTOR (HORSEPOWER)
- BUTTERFLY VALVE
- M4 — ELECTRIC ACTIVATED BUTTERFLY VALVE
- SP — SAMPLING PORT
- DIAPHRAGM VALVE
- CHECK VALVE
- FLEXIBLE CONNECTION
- REDUCER
- ELECTRICAL SIGNAL
- INSTRUMENT CONNECTION TO PROCESS

DPAH	DIFFERENTIAL PRESSURE ALARM HIGH
DPS	DIFFERENTIAL PRESSURE SENSOR
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
FS	FLOW SENSOR
FT	FLOW TRANSMITTER
HOA	HAND/OFF/AUTO
HS	HAND SWITCH
JI	POWER INDICATOR
LAH	LEVEL ALARM HIGH
LAL	LEVEL ALARM LOW
LSH	LEVEL SWITCH HIGH
LSHH	LEVEL SWITCH HIGH HIGH
LSL	LEVEL SWITCH LOW
LSLL	LEVEL SWITCH LOW LOW
PAH	PRESSURE ALARM HIGH
PT	PRESSURE TRANSMITTER
TAH	TEMPERATURE ALARM HIGH
TS	TEMPERATURE SENSOR
TT	TEMPERATURE TRANSMITTER

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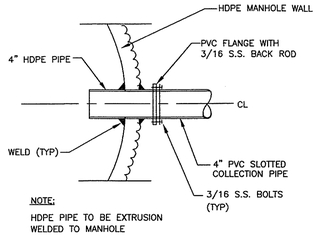
FORMER GE COURT STREET BUILDING 5/5A
TOWN OF DEWITT, NEW YORK

PROCESS AND INSTRUMENTATION DIAGRAM

DRAWING NO. 4

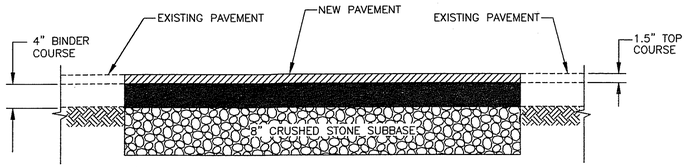
PROJECT NO. 86143-003.000



TYPICAL MANHOLE PENETRATION

DETAIL 3 (5 | 5)

SCALE: 1"= 1'

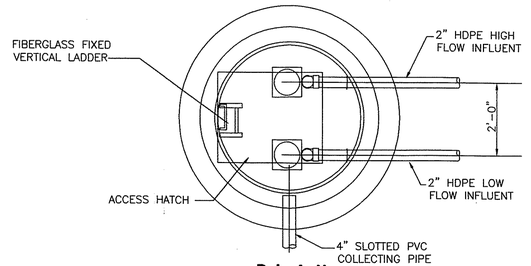


PAVEMENT RESTORATION

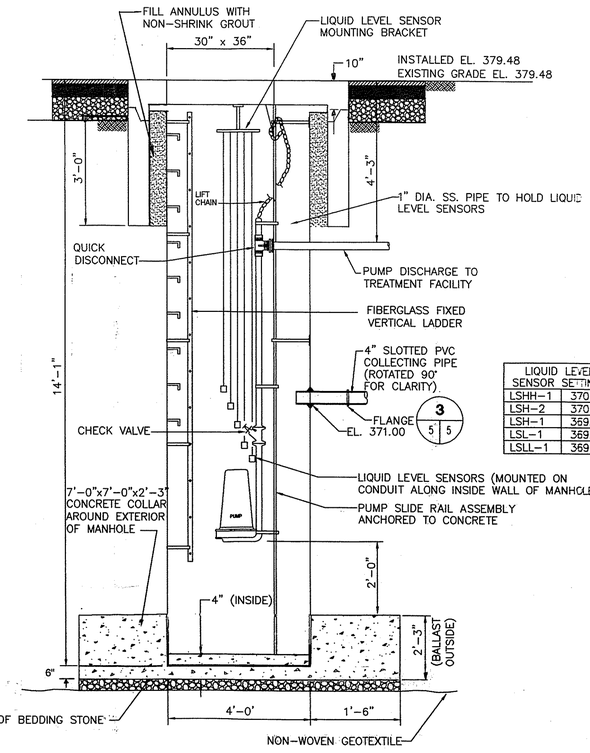
NOTE: NOT COMPLETED TO DATE

SECTION 2 (5 | 5)

SCALE: N.T.S.



PLAN



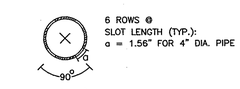
LIQUID LEVEL SENSOR SETTINGS	
LSHH-1	370.75
LSH-2	370.25
LSH-1	369.75
LSL-1	369.25
LSLL-1	369.00

NOTE:
CONCRETE COLLAR TO GO AROUND PERIMETER OF MANHOLE AS SHOWN.

PROPOSED HDPE MANHOLE

DETAIL 6 (1 | 5)

SCALE: N.T.S.

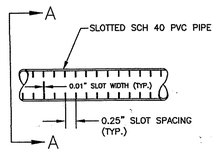


A-A

SECTION A (5 | 5)

SCALE: 1"= 1'

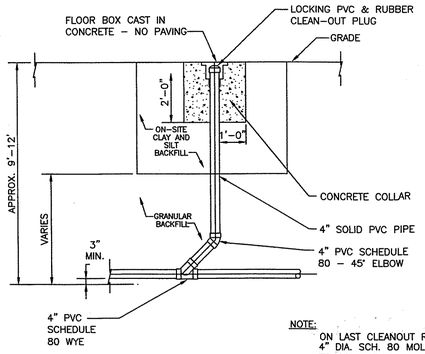
MALMD-09



PVC SLOTTED PIPE

DETAIL 4 (5 | 5)

SCALE: 1"= 1'

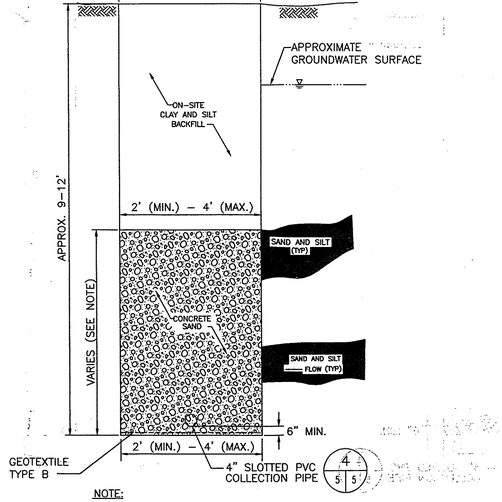


NOTE:
ON LAST CLEANOUT RISER SECURE 4" DIA. SCH. 80 MOLDED PVC CAP TO COLLECTION PIPE UPSTREAM OF WYE

CLEANOUT RISER

DETAIL 1 (1 | 5)

SCALE: 1"=3'-0"



NOTE:
DEPTH OF CONCRETE SAND SHALL BE A MIN. OF 2 FEET ABOVE TOP OF PIPE OR AS SHOWN ON PROFILE.

TYPICAL COLLECTION SYSTEM

DETAIL 5 (1 | 5)

SCALE: N.T.S.

MALMD-15

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FORMER GE COURT STREET BUILDING 5/5A
TOWN OF DEWITT, NEW YORK

COLLECTION SYSTEM DETAILS

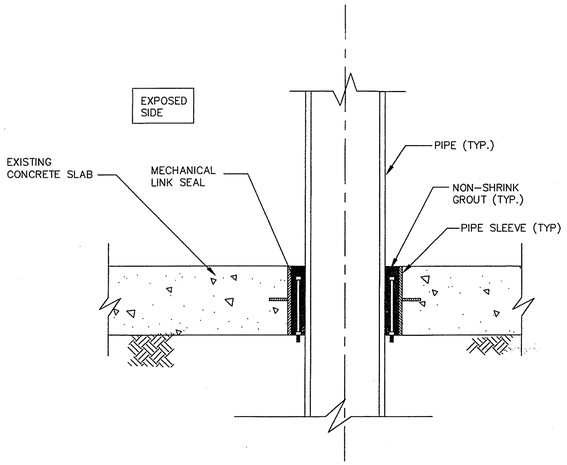
DRAWING NO. 5

PROJECT NO. 38143-003.000

X: (SEE SIDE)
P: EMCON
3/30/98 SYR-54-RLP
38158001/AS-BUILT/ANDDS02.DWG

ENE-ANDVR2/DATA: N:\DWG\38143003\007\VNRDS02.dwg Xrefs: MALMD-09, MALMD-11, MALMD-14, MALMD-03, MALMB01, MALMD-15, MALMD-08 Scale: 1 = 1.00 DimScale: 1 = 1.00 Date: 8/18/97 Time: 7:37 AM Operator: NWOODGET

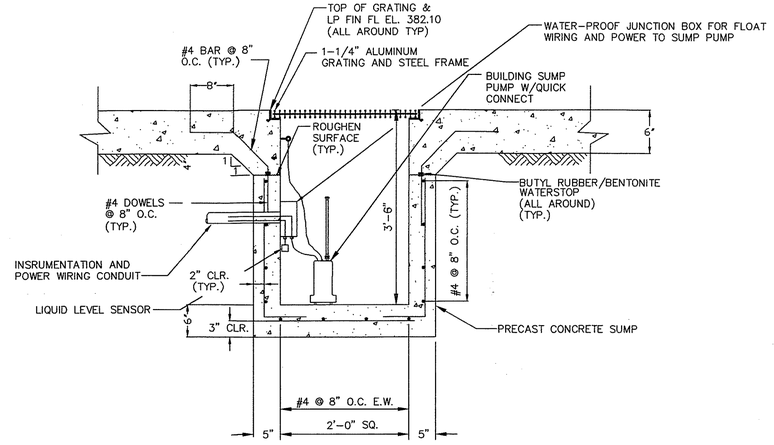
1" 1/2" 0" 1"



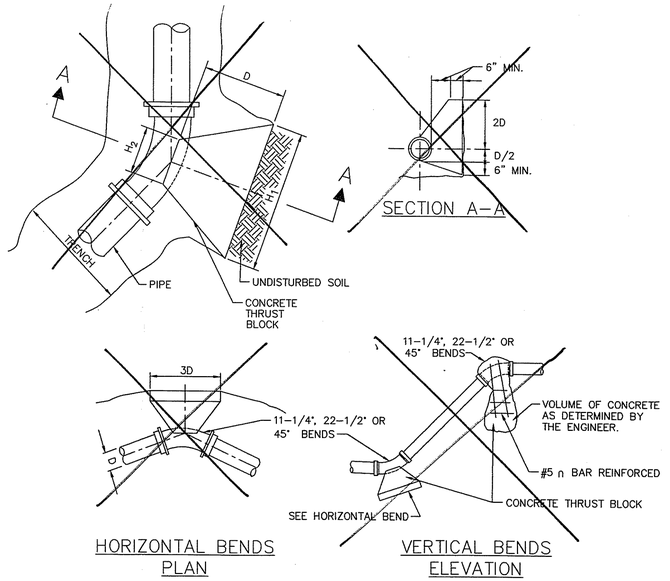
TYPICAL SLAB PIPE PENETRATION

DETAIL 1/3|6

SCALE: N.T.S.



BUILDING SUMP



HORIZONTAL BENDS PLAN

VERTICAL BENDS ELEVATION

NOTES:
1. DIMENSIONS ARE CONTROLLED BY THE DIAMETER OF THE MAIN BRANCH.
2. ALL CONCRETE TO BE 4,000 PSI MINIMUM.
3. ALL FORCE MAINS (HDPE) CHANGED DIRECTIONS GRADUALLY WITH CONTINUOUS PIPE. THEREFORE, NO THRUST BLOCKS WERE REQUIRED.

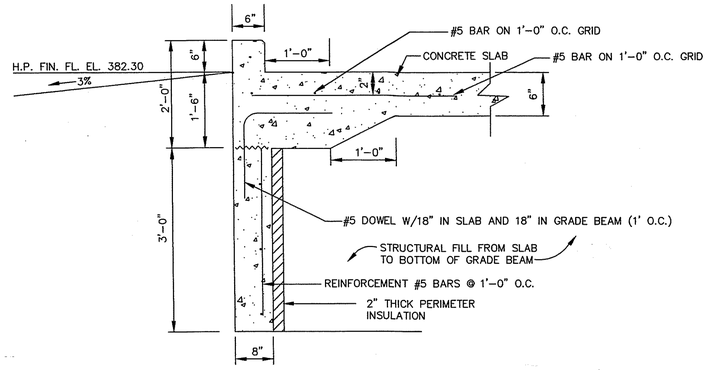
TABLE OF DIMENSIONS FOR CONCRETE BLOCKING

TEES, CROSSES, & PLUGS				90° BENDS				45° BENDS				PIPE DIA.
H_1	H_2	D	FT^3	H_1	H_2	D	FT^3	H_1	H_2	D	FT^3	
18"	10"	18"	1.90	18"	10"	12"	1.90	18"	6"	12"	1.50	2" & LESS
24"	12"	18"	2.25	24"	12"	12"	2.25	18"	8"	12"	1.60	3" & 4"

CONCRETE THRUST BLOCKING

DETAIL 4/6|6

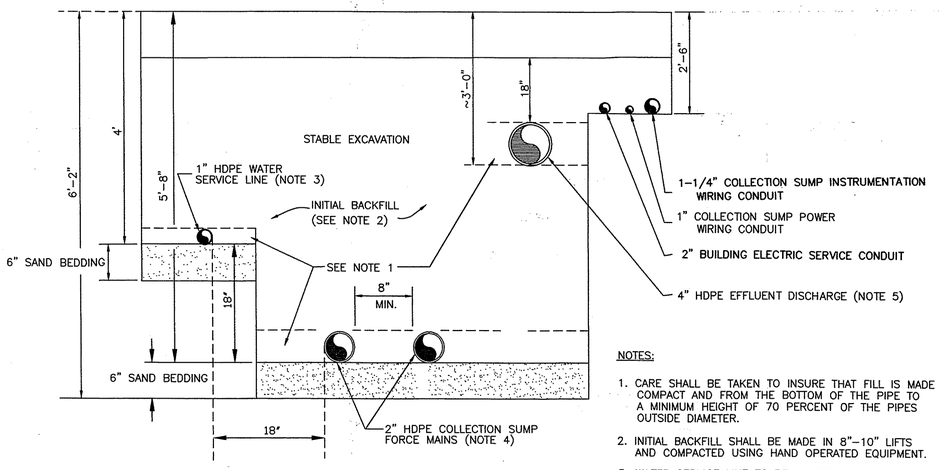
SCALE: N.T.S.



GRADE BEAM AND SLAB-ON-GRADE

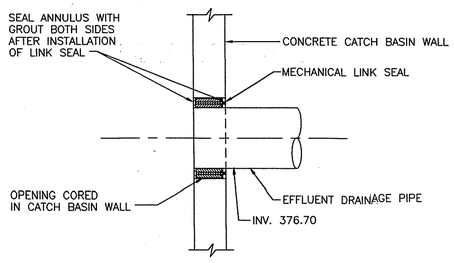
DETAIL 6/3|6

SCALE: N.T.S.



NOTES:

1. CARE SHALL BE TAKEN TO INSURE THAT FILL IS MADE COMPACT AND FROM THE BOTTOM OF THE PIPE TO A MINIMUM HEIGHT OF 70 PERCENT OF THE PIPES OUTSIDE DIAMETER.
2. INITIAL BACKFILL SHALL BE MADE IN 8"-10" LIFTS AND COMPACTED USING HAND OPERATED EQUIPMENT.
3. WATER SERVICE LINE TO BE PLACED ON A SOLID SHELF.
4. THE BOTTOM OF THE WATER SERVICE LINE SHALL BE A MINIMUM OF 18" ABOVE TOP OF THE FORCE MAINS, AND HAVE AN 18" HORIZONTAL CLEARANCE.
5. SLOPED PIPE ELEVATION VARIES (SEE DRAWING 1 FOR DETAILS.)



CATCH BASIN PENETRATION

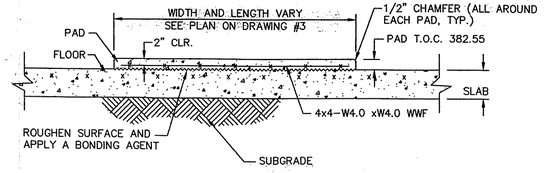
DETAIL 2/1|6

SCALE: N.T.S.

PIPE BEDDING

DETAIL 3/6|6

SCALE: N.T.S.



TYPICAL EQUIPMENT PAD

DETAIL 5/3|6

SCALE: N.T.S.

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FORMER GE COURT STREET BUILDING 5/5A
TOWN OF DEWITT, NEW YORK

MISCELLANEOUS DETAILS

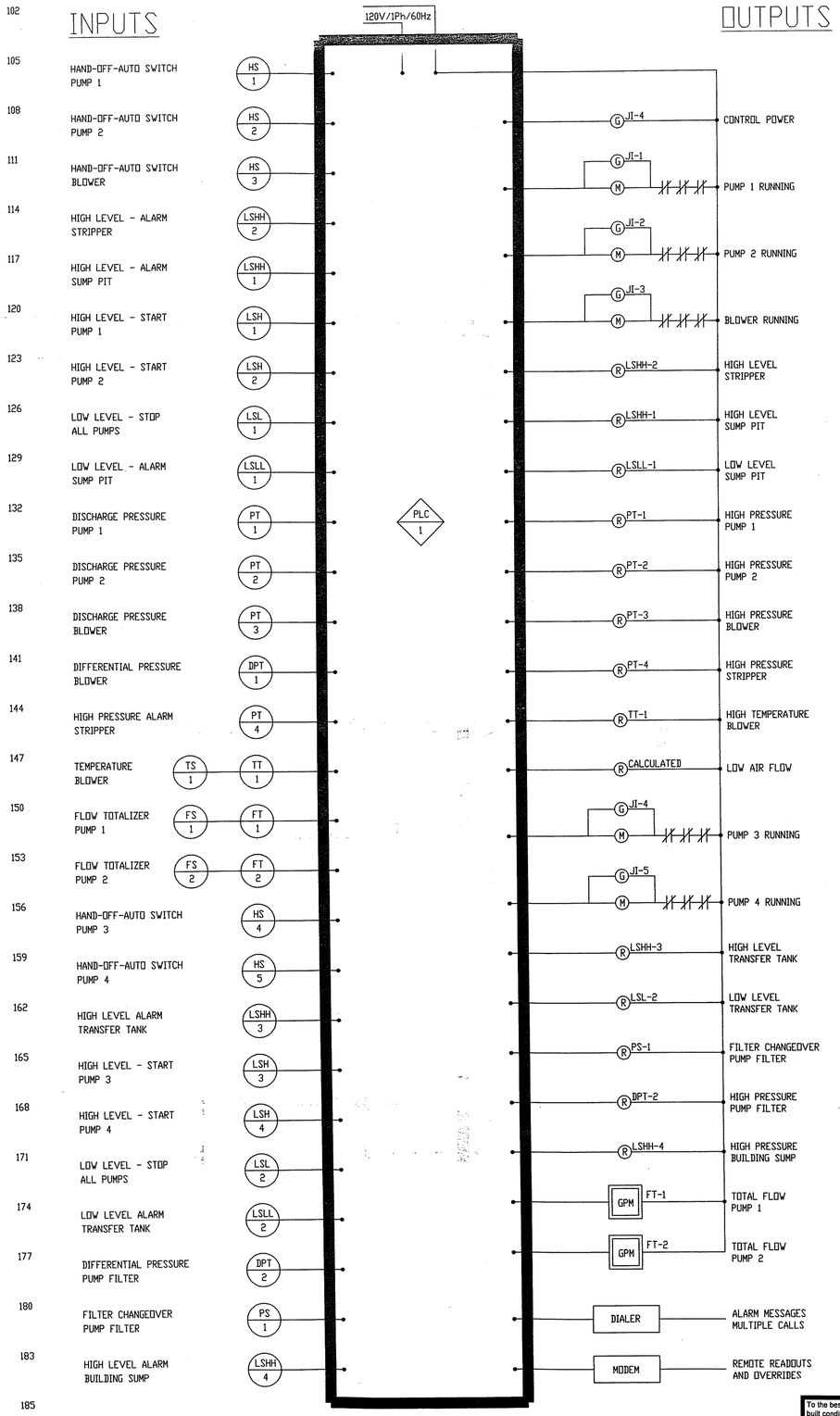
DRAWING NO. 6

PROJECT NO. 86143-003.000

X: (SEE SIDE)
P: EMCON
3/30/98 SYR-54-RLP
38158001/AS-BUILT/ANDDS01.DWG

ENE-ANDYR2/DATA: N:\DWG\86143003\000\VNDDS01.dwg Xrefs: ANHCD-14, ANHCD-11, OC-D-352, AND0-05, AND0-06, ANHCD-20, ANHCD-12, MALMBD01 Scale: 1 = 1.00 DimScale: 1 = 1.00 Date: 8/18/97 Time: 6:06 PM Operator: NWOODGET

1" 1/2" 0" 1"



INSTRUMENTATION AND CONTROL

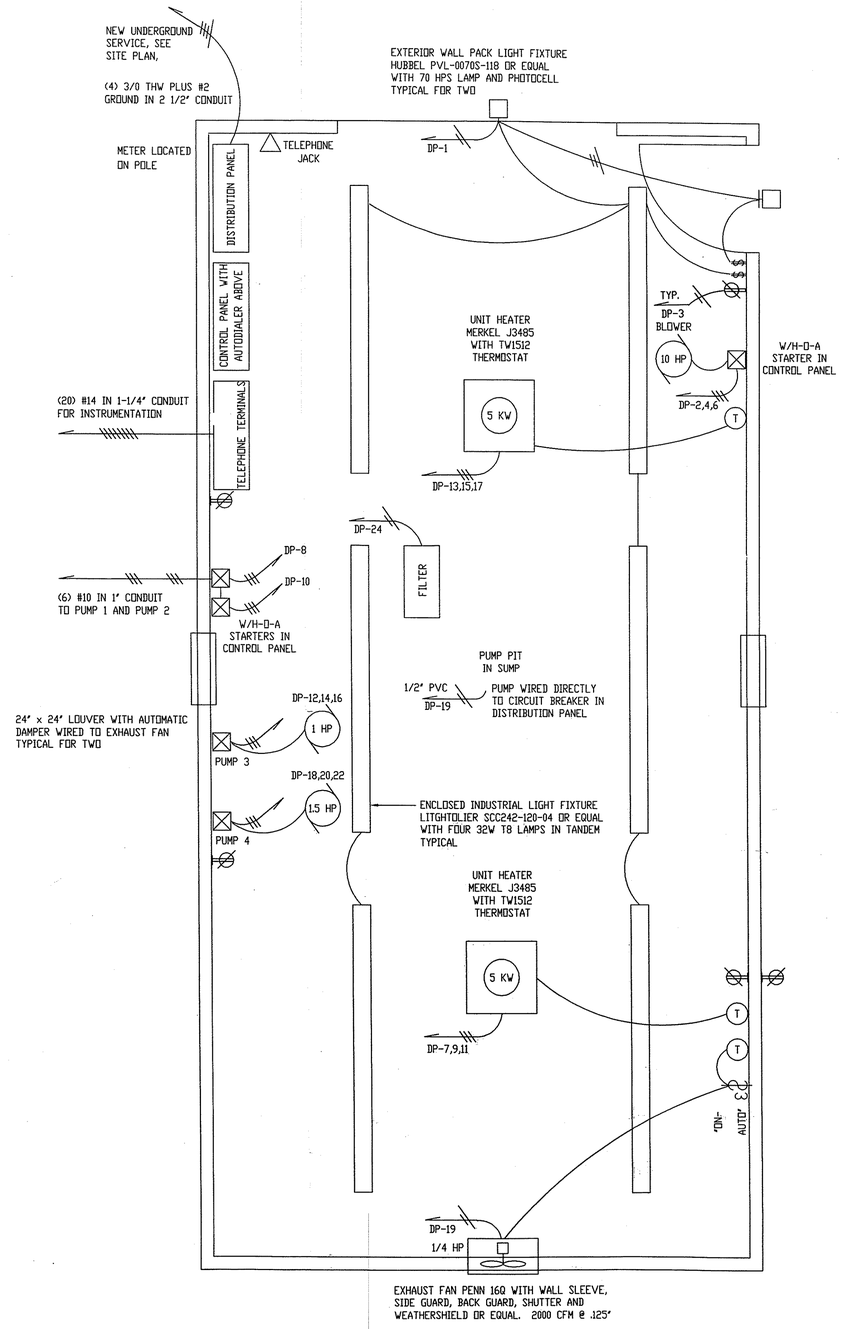
NO SCALE

PANEL DP

42 SPACES, 225 AMPERE MAIN BUSS, 120/208 VOLTS, 3 PHASE 4 WIRE
200 AMPERE MAIN C.B.

SPACE	C.B.	DESCRIPTION	SPACE	C.B.	DESCRIPTION
1	20 A	LIGHTING	2	40 A 3 P	BLOWER, 10 HP #8 WIRE IN 3/4" COND.
3	20 A	RECEPTACLES	4		
5	20 A	INSTRUMENTATION	6		
7	20 A 3 P	HEATER, 5 KW	8	20 A	PUMP 1, 1/3 HP
9			10	20 A	PUMP 2, 1/2 HP
11			12	20 A 3 P	PUMP 3, 1 HP
13	20 A 3 P	HEATER, 5 KW	14		
15			16		
17			18	20 A 3 P	PUMP 4, 1-1/2 HP
19	20 A	EXHAUST FAN & SUMP PUMP	20		
21	20 A	SPARE	22		
23	20 A	SPARE	24	20 A	FILTER
25	20 A	SPARE	26	20 A	FLOWMETERS
27		SPACE	28		SPACE
29		SPACE	30		SPACE
31		SPACE	32		SPACE
33		SPACE	34		SPACE
35		SPACE	36		SPACE
37		SPACE	38		SPACE
39		SPACE	40		SPACE
41		SPACE	42		SPACE

ALL CIRCUITS SHALL BE #12 WIRE IN 1/2" CONDUIT UNLESS OTHERWISE INDICATED.



TREATMENT BUILDING PLAN

1/2" = 1'-0"

To the best of my knowledge and belief, and based upon the representations of representatives of Blasland, Bouck & Lee, Inc., and O'Brien and Gere Technical Services, Inc., these record drawings reflect as-built conditions of the groundwater collection and treatment system as constructed by O'Brien & Gere Technical Services, Inc. with construction oversight by Blasland, Bouck & Lee, Inc., as documented in the Certification Report (BB&L, March 1998) prepared for the system. EMCON has not prepared the record drawings, and has not field verified the actual construction. EMCON has compared these record drawings to mark-ups of the design drawings prepared by BB&L to document construction, photographs of the completed treatment system, and the Certification Report (BB&L, March 1998), and has confirmed the inclusion on these drawings of field changes and substitutions approved during construction by EMCON.

Mark A. Swyka, P.E.
N.Y.P.E Lic. No. 64543

EMCON/Wehran-New York, Inc.

EMCON

LOCKHEED MARTIN CORPORATION
FORMER GE COURT STREET BUILDING 5/5A
TOWN OF DEWITT, NEW YORK

ELECTRICAL SYSTEM

DRAWING NO. 7
PROJECT NO. 86143-003.000

X: (SEE SIDE)
P: EMCON
3/30/98 SYR-54-RLP
38158001/AS-BUILT/MALMEL01.DWG

1" 1/2" 0" 1"

Attachment 2

Construction Photographs

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

PHOTO LOG SHEET

Proj. No.: 38158

Project:
LMC Court Street
Ground Water
Collection and
Treatment System
Installation

Date: November 1997

Photo By: W. DeCarr

Description:

Preconstruction photo of the ground water collection trench location along Onondaga County right-of-way.

Proj. No.: 38158

Project:
LMC Court Street
Ground Water
Collection and
Treatment System
Installation

Date: December 1997

Photo By: W. DeCarr

Description:

Construction of ground water collection trench including the installation of the PVC collection pipe and sand backfill.

PHOTO LOG SHEET

Proj. No.: 38158

Project:
LMC Court Street
Ground Water
Collection and
Treatment System
Installation

Date: November 1997

Photo By: W. DeCarr

Description:

Construction of forcemain trench from the ground water collection sump to the treatment building, including the installation of electrical conduits.

Proj. No.: 38158

Project:
LMC Court Street
Ground Water
Collection and
Treatment System
Installation

Date: December 1997

Photo By: W. DeCarr

Description:

Installation of HDPE ground water collection sump with concrete anti-buoyancy anchor.

PHOTO LOG SHEET

Proj. No.: 38158

Project:
LMC Court Street
Ground Water
Collection and
Treatment System
Installation

Date: December 1997

Photo By: W. DeCarr

Description:

Ground water collection sump installed, including submersible pumps, pump guide rails and access hatch at grade.

Proj. No.: 38158

Project:
LMC Court Street
Ground Water
Collection and
Treatment System
Installation

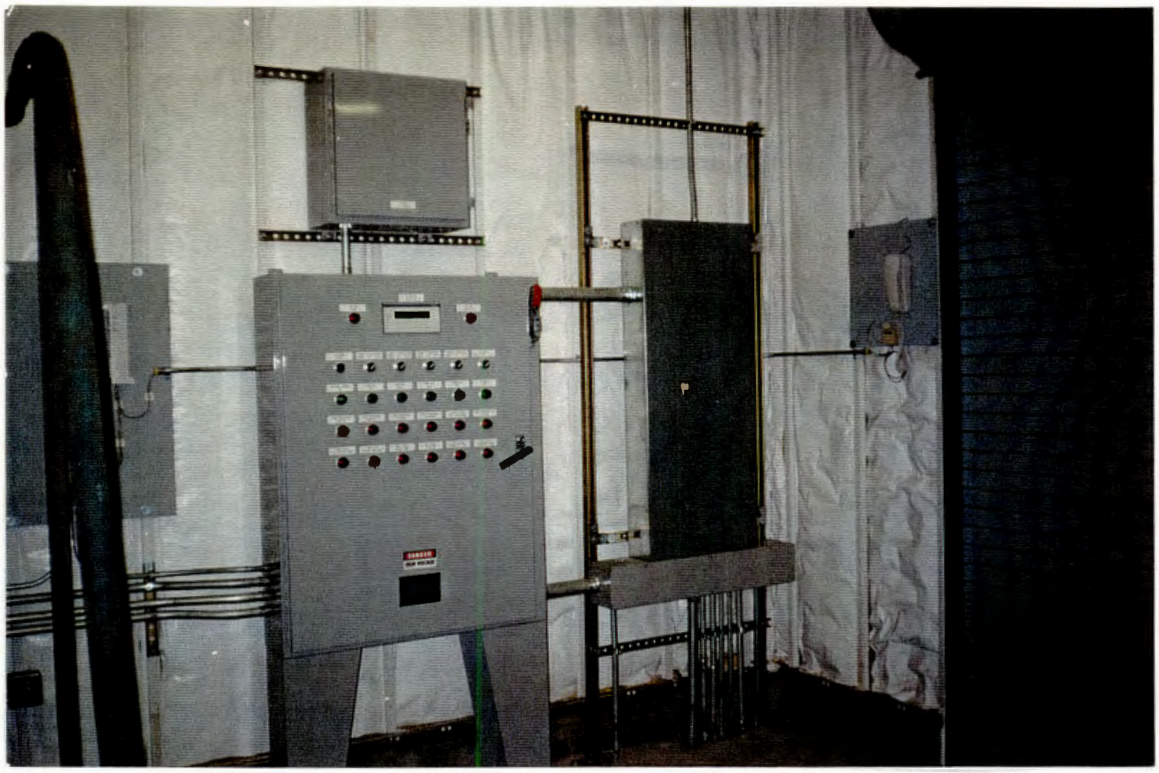
Date: January 1998

Photo By: W. DeCarr

Description:

Completed ground water treatment system building, located near the northwest corner of Building 5.

PHOTO LOG SHEET



Proj. No.: 38158

Project:
LMC Court Street
Ground Water
Collection and
Treatment System
Installation

Date: January 1998

Photo By: W. DeCarr

Description:

Ground water collection and treatment system control panel located within treatment building.

Proj. No.: 38158

Project:
LMC Court Street
Ground Water
Collection and
Treatment System
Installation.

Date: January 1998

Photo By: W. DeCarr

Description:

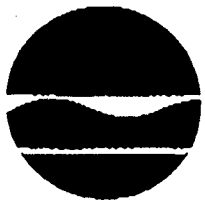
Ground water treatment process equipment installed within the treatment building. Foreground: bag filters. Background: diffused aeration system.

Attachment 3

NYSDEC Discharge Limitations

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7010



John P. Cahill
Commissioner

July 9, 1997

Patrick D. Salvador, P.E.
Principal Engineer
Lockheed Martin Corporation
P.O. Box 4840
Syracuse, New York 13221-4840

Re: Former GE Court Street 5/5A Plant (Site ID# 734070)

Dear Mr. Salvador:

The Department has received and reviewed Lockheed Martin's May 23, 1997 application for effluent discharge to surface water limitations applicable to the groundwater collection and treatment system proposed for the Court Street 5/5A site. The effluent discharge limitations and conditions are enclosed.

The Department has not yet received Lockheed Martin's application for effluent discharge to air limitations. It is assumed that this application will be submitted as part of the draft Interim Remedial Measure (IRM) Design Report. As has previously been discussed, processing of this application may take several weeks. To avoid any delays in IRM implementation, Lockheed Martin should submit the application for air discharge as soon as possible.

If you have any questions, feel free to contact me at (518) 457-1641.

Sincerely,

Alyse Peterson

Alyse Peterson
Environmental Engineer
Bureau of Central Remedial Action
Division of Environmental Remediation

cc: R. Heerkens (NYSDOH)

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning Startup of remediation activities

and lasting until 5 years after startup of remediation activities
the discharges from the treatment facility to Sanders Creek and/or Ley Creek shall be limited and monitored by the operator as specified below:

Outfall Number & Effluent Parameter	Discharge Limitations Daily Avg.	Daily Max.	Units	Minimum Monitoring Requirements Measurement Frequency	Sample Type
Outfall 001: Treated Effluent from Groundwater Collection Trench					
Flow	Monitor	Monitor	GPM	Weekly	Instantaneous
pH (Range)	Monitor	(6.0 - 9.0)	SU	Weekly	Grab
Solids, Total Dissolved	Monitor	Monitor	mg/l	Weekly	Grab
Arsenic, Total	Monitor	0.03	mg/l	Monthly	Grab
Chromium, Total	Monitor	0.025	mg/l	Monthly	Grab
Copper, Total	Monitor	0.03	mg/l	Monthly	Grab
Iron, Total	Monitor	1.7	mg/l	Weekly	Grab
Lead, Total	Monitor	0.02	mg/l	Monthly	Grab
Nickel, Total	Monitor	0.025	mg/l	Monthly	Grab
Selenium, Total	Monitor	0.01	mg/l	Monthly	Grab
Silver, Total	Monitor	0.01	mg/l	Monthly	Grab
Thallium, Total	Monitor	0.015	mg/l	Monthly	Grab
Vanadium, Total	Monitor	0.03	mg/l	Monthly	Grab
Zinc, Total	Monitor	0.4	mg/l	Monthly	Grab
Vinyl Chloride	Monitor	0.05	mg/l	Weekly	Grab
Chloroethane	Monitor	0.17	mg/l	Weekly	Grab
1,1-Dichloroethane	Monitor	0.03	mg/l	Weekly	Grab
1,2-Dichloroethene (Total)	Monitor	0.03	mg/l	Weekly	Grab
1,1,1-Trichloroethane	Monitor	0.01	mg/l	Weekly	Grab
Trichloroethene	Monitor	0.01	mg/l	Weekly	Grab
Benzene	Monitor	0.006	mg/l	Weekly	Grab
Toluene	Monitor	0.01	mg/l	Weekly	Grab
Ethylbenzene	Monitor	0.01	mg/l	Weekly	Grab
Xylenes, Total	Monitor	0.01	mg/l	Weekly	Grab

Special Conditions:

(1) Discharge is not authorized until such time as an engineering submission showing the method of treatment is approved by the Department. The discharge rate may not exceed the effective treatment system capacity. All monitoring data, engineering submissions and modification requests must be submitted to the following DER contact person: ALYSE PETERSON.

(2) Only site generated wastewater is authorized for treatment and discharge.

(3) Authorization to discharge is valid only for the period noted above but may be renewed if appropriate. A request for renewal must be received 6 months prior to the expiration date to allow for a review of monitoring data and reassessment of monitoring requirements.

Special Conditions (ctd.):

(4) Both concentration (mg/l or µg/l) and mass loadings (lbs/day) must be reported to the Department for all parameters except flow and pH.

(5) Samples and measurements, to comply with the monitoring requirements specified above, shall be taken from the effluent side of the treatment system prior to discharge to either Sanders Creek or Ley Creek.

(6) The minimum measurement frequency for all the parameters (unless otherwise noted) shall be Monthly following a period of 16 consecutive Weekly sampling events showing no exceedances of the stated discharge limitations. If a discharge limitation for any parameter is exceeded the measurement frequency for all parameters shall again be Weekly, until a period of 8 consecutive sampling events shows no exceedances at which point Monthly monitoring may resume.

Attachment 4

Town of DeWitt Building Permit and Certificate of Occupancy

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

THIS PERMIT MUST BE POSTED IN A CONSPICUOUS PLACE.

THIS IS TO CERTIFY THAT

O'BRIEN + GERE TECH SERVICE

HAS BEEN GRANTED A

PERMIT

TOWN OF DE WITT
DEPARTMENT OF DEVELOPMENT & OPERATIONS
5400 BUTTERNUT DRIVE
P.O. BOX 159
DE WITT, N.Y. 13214
446-3768

No 12444

FOR 512 # BLDG.

AT 6439 DEERE RD.

FOUNDATION _____

ROUGH FRAMING/STEEL _____

INSULATION _____

FIREPLACE _____ ROUGH IN _____ THROAT _____

INTERIOR&FIRE PARTITIONS _____

ELEC. FINAL _____

PLUMBING FINAL _____

CERTIFICATE OF OCCUPANCY/COMPLIANCE(FINAL INSPECTION _____

(See Reverse Side For General Building Rules) ☞

IMPORTANT RULES

This Permit Card *MUST* be conspicuously posted when excavation is started. (Fasten to a temporary support if necessary.) Building inspector *MUST* have access to permit card.

If permit card is destroyed, a duplicate *WILL* be furnished.

Failure to comply with this order *WILL* result in an IMMEDIATE

STOP-WORK ORDER

PERMIT NO. 12444

TOWN OF DEWITT
DEPARTMENT OF
DEVELOPMENT & OPERATIONS
County of Onondaga
State of New York

CERTIFICATE OF OCCUPANCY

Location 6439 Deere Road

Tax Map No. 23 Block 06 Lot 02

No. ---- Date 9 February 1998

This certifies that the work under the above development permit on the structure at the above location has been substantially completed and under the applicable current Zoning Ordinance of the Town of DeWitt and the New York State Uniform Fire Prevention and Building Code and may be used and/or occupied for structure for waste treatment equipment purposes.

This certificate is issued to Lockheed Martin Corp. of the aforesaid structure.
(OWNER, LESSEE, TENANT)

ENFORCEMENT OFFICER

Attachment 5

Laboratory Reports for Soil Waste Characterization

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

DATE: / /

APPROVAL: PFF
QC: LW/DL/SC

Upstate Laboratories, Inc.
Analysis Results
Report Number: 33097174
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC.
Sampled by: Client
Lab I.D.: 10170
LOCKHEED MARTIN CORP
COURT STREET SOIL FILE 1 1400H 11/26/97 C

ULI I.D.: 33097174
Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Benzene	<4ug/kg dw	12/04/97		VM1701
trans-1,3-Dichloropropene	<4ug/kg dw	12/04/97		VM1701
Bromoform	<4ug/kg dw	12/04/97		VM1701
4-Methyl-2-pentanone	<13ug/kg dw	12/04/97		VM1701
2-Hexanone	<13ug/kg dw	12/04/97		VM1701
Tetrachloroethene	<4ug/kg dw	12/04/97		VM1701
1,1,2,2-Tetrachloroethane	<4ug/kg dw	12/04/97		VM1701
Toluene	<4ug/kg dw	12/04/97		VM1701
Chlorobenzene	<4ug/kg dw	12/04/97		VM1701
Ethylbenzene	<4ug/kg dw	12/04/97		VM1701
Styrene	<4ug/kg dw	12/04/97		VM1701
m-Xylene and p-Xylene	<4ug/kg dw	12/04/97		VM1701
o-Xylene	<4ug/kg dw	12/04/97		VM1701
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1221	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1232	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1242	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1248	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1254	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1260	<0.1mg/kg dw	12/03/97		PA3943
Total PCB				

dw = Dry weight

DATE: / /

APPROVAL: PFF
QC: LW/DL/SC

Upstate Laboratories, Inc.
Analysis Results
Report Number: 33097174
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC. LOCKHEED MARTIN CORP
Sampled by: Client
Lab I.D.: 10170
COURT STREET SOIL FILE 2 1420H 11/26/97 C

ULI I.D.: 33097175
Matrix: Soil

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	pH	8.39U	12/03/97		WB9793
	Flash Point	>60degC	12/02/97		WB9781
	Total Solids	79%	11/26/97		WB9747
	RCRA Reactivity				
	Reactive Sulfide	<50mg/kg	12/02/97		WB9763
	Reactive Cyanide	<1.0mg/kg	12/02/97		WB9759
TCLP	Arsenic	<0.5mg/l	12/02/97		MA9214
TCLP	Barium	1.7mg/l	12/02/97		MA9214
TCLP	Cadmium	<0.005mg/l	12/02/97		MA9214
TCLP	Chromium	<0.05mg/l	12/02/97		MA9214
TCLP	Lead	<0.1mg/l	12/02/97		MA9214
TCLP	Mercury	<0.0004mg/l	12/03/97		MA9220
TCLP	Selenium	<0.5mg/l	12/02/97		MA9214
TCLP	Silver	<0.05mg/l	12/02/97		MA9214
	TCL Volatiles by EPA Method 8240				
	Chloromethane	<4ug/kg dw	12/04/97		VM1701
	Bromomethane	<4ug/kg dw	12/04/97		VM1701
	Vinyl Chloride	<4ug/kg dw	12/04/97		VM1701
	Chloroethane	<4ug/kg dw	12/04/97		VM1701
	Methylene Chloride	8ug/kg dw	12/04/97	44	VM1701
	Acetone	<13ug/kg dw	12/04/97		VM1701
	Carbon Disulfide	<4ug/kg dw	12/04/97		VM1701
	1,1-Dichloroethene	<4ug/kg dw	12/04/97		VM1701
	1,1-Dichloroethane	<4ug/kg dw	12/04/97		VM1701
	trans-1,2-Dichloroethene	<4ug/kg dw	12/04/97		VM1701
	cis-1,2-Dichloroethene	<4ug/kg dw	12/04/97		VM1701
	Chloroform	<4ug/kg dw	12/04/97		VM1701
	1,2-Dichloroethane	<4ug/kg dw	12/04/97		VM1701
	2-Butanone	<13ug/kg dw	12/04/97		VM1701
	1,1,1-Trichloroethane	<4ug/kg dw	12/04/97		VM1701
	Carbon Tetrachloride	<4ug/kg dw	12/04/97		VM1701
	Bromodichloromethane	<4ug/kg dw	12/04/97		VM1701
	1,2-Dichloropropane	<4ug/kg dw	12/04/97		VM1701
	cis-1,3-Dichloropropene	<4ug/kg dw	12/04/97		VM1701
	Trichloroethene	<4ug/kg dw	12/04/97		VM1701
	Dibromochloromethane	<4ug/kg dw	12/04/97		VM1701
	1,1,2-Trichloroethane	<4ug/kg dw	12/04/97		VM1701

dw = Dry Weight

DATE: / /

Upstate Laboratories, Inc.
Analysis Results
Report Number: 33097174
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC.
Sampled by: Client

APPROVAL: PFF
QC: LW/DS/SC
Lab I.D.: 10170
LOCKHEED MARTIN CORP
COURT STREET SOIL PILE 2 1420M 11/26/97 C

ULI I.D.: 33097175 Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Benzene	<4ug/kg dw	12/04/97		VM1701
trans-1,3-Dichloropropene	<4ug/kg dw	12/04/97		VM1701
Bromoform	<4ug/kg dw	12/04/97		VM1701
4-Methyl-2-pentanone	<13ug/kg dw	12/04/97		VM1701
2-Hexanone	<13ug/kg dw	12/04/97		VM1701
Tetrachloroethene	<4ug/kg dw	12/04/97		VM1701
1,1,2,2-Tetrachloroethane	<4ug/kg dw	12/04/97		VM1701
Toluene	<4ug/kg dw	12/04/97		VM1701
Chlorobenzene	<4ug/kg dw	12/04/97		VM1701
Ethylbenzene	<4ug/kg dw	12/04/97		VM1701
Styrene	<4ug/kg dw	12/04/97		VM1701
m-Xylene and p-Xylene	<4ug/kg dw	12/04/97		VM1701
o-Xylene	<4ug/kg dw	12/04/97		VM1701
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1221	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1232	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1242	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1248	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1254	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1260	<0.1mg/kg dw	12/03/97		PA3943
Total PCB	<0.1mg/kg dw	12/03/97		PA3943

dw = Dry weight

DATE: / /

APPROVAL: PFF
QC: LW/DL/SC

Upstate Laboratories, Inc.
Analysis Results
Report Number: 33097174
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC.
Sampled by: Client

Lab I.D.: 10170
LOCKHEED MARTIN CORP
COURT STREET SOIL PILE 3 1435H 11/26/97 C

ULI I.D.: 33097176

Matrix: Soil

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	pH	7.9SU	12/03/97		WB9793
	Flash Point	>60degC	12/02/97		WB9781
	Total Solids	83%	11/26/97		WB9747
	RCRA Reactivity				
	Reactive Sulfide	<50mg/kg	12/02/97		WB9763
	Reactive Cyanide	<1.0mg/kg	12/02/97		WB9759
TCLP	Arsenic	<0.5mg/l	12/02/97		MA9214
TCLP	Barium	1.6mg/l	12/02/97		MA9214
TCLP	Cadmium	<0.005mg/l	12/02/97		MA9214
TCLP	Chromium	<0.05mg/l	12/02/97		MA9214
TCLP	Lead	<0.1mg/l	12/02/97		MA9214
TCLP	Mercury	<0.0004mg/l	12/03/97		MA9220
TCLP	Selenium	<0.5mg/l	12/02/97		MA9214
TCLP	Silver	<0.05mg/l	12/02/97		MA9214
	TCL Volatiles by EPA Method 8240				
	Chloromethane	<4ug/kg dw	12/04/97		VM1701
	Bromomethane	<4ug/kg dw	12/04/97		VM1701
	Vinyl Chloride	<2ug/kg dw	12/04/97		VM1701
	Chloroethane	<4ug/kg dw	12/04/97		VM1701
	Methylene Chloride	6ug/kg dw	12/04/97	44	VM1701
	Acetone	18ug/kg dw	12/04/97	44	VM1701
	Carbon Disulfide	<4ug/kg dw	12/04/97		VM1701
	1,1-Dichloroethene	<4ug/kg dw	12/04/97		VM1701
	1,1-Dichloroethane	<4ug/kg dw	12/04/97		VM1701
	trans-1,2-Dichloroethene	<4ug/kg dw	12/04/97		VM1701
	cis-1,2-Dichloroethene	<4ug/kg dw	12/04/97		VM1701
	Chloroform	<4ug/kg dw	12/04/97		VM1701
	1,2-Dichloroethane	<4ug/kg dw	12/04/97		VM1701
	2-Butanone	<12ug/kg dw	12/04/97		VM1701
	1,1,1-Trichloroethane	<4ug/kg dw	12/04/97		VM1701
	Carbon Tetrachloride	<4ug/kg dw	12/04/97		VM1701
	Bromodichloromethane	<4ug/kg dw	12/04/97		VM1701
	1,2-Dichloropropane	<4ug/kg dw	12/04/97		VM1701
	cis-1,3-Dichloropropene	<4ug/kg dw	12/04/97		VM1701
	Trichloroethene	<4ug/kg dw	12/04/97		VM1701
	Dibromochloromethane	<4ug/kg dw	12/04/97		VM1701
	1,1,2-Trichloroethane	<4ug/kg dw	12/04/97		VM1701

dw = Dry weight

DATE: / /

Upstate Laboratories, Inc.
Analysis Results
Report Number: 33097174
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC.
Sampled by: Client

APPROVAL: PFE
QC: LW/DL/SC
Lab I.D.: 10170
LOCKHEED MARTIN CORP
COURT STREET SOIL PILE 3 1435H 11/26/97 C

ULI I.D.: 33097176

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
Benzene	<4ug/kg dw	12/04/97		VM1701
trans-1,3-Dichloropropene	<4ug/kg dw	12/04/97		VM1701
Bromoform	<4ug/kg dw	12/04/97		VM1701
4-Methyl-2-pentanone	<12ug/kg dw	12/04/97		VM1701
2-Hexanone	<12ug/kg dw	12/04/97		VM1701
Tetrachloroethene	<4ug/kg dw	12/04/97		VM1701
1,1,2,2-Tetrachloroethane	<4ug/kg dw	12/04/97		VM1701
Toluene	<4ug/kg dw	12/04/97		VM1701
Chlorobenzene	<4ug/kg dw	12/04/97		VM1701
Ethylbenzene	<4ug/kg dw	12/04/97		VM1701
Styrene	<4ug/kg dw	12/04/97		VM1701
m-Xylene and p-Xylene	<4ug/kg dw	12/04/97		VM1701
o-Xylene	<4ug/kg dw	12/04/97		VM1701
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1221	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1232	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1242	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1248	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1254	<0.1mg/kg dw	12/03/97		PA3943
Aroclor 1260	<0.1mg/kg dw	12/03/97		PA3943
Total PCB	<0.1mg/kg dw	12/03/97		PA3943

dw = Dry weight

DATE: 01/13/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 35097121
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC.
Sampled by: Client

APPROVAL:
QC:
Lab I.D.: 10170

LOCKHEED MARTIN
SOIL PILE 4 1615H 12/16/97 C

ULI I.D.: 35097121 Matrix: Soil

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	pH	7.4SU	12/17/97		WB9971
	Flash Point	>60degC	12/18/97		WB9984
	Total Solids	81%	12/18/97		WB9987
	RCRA Reactivity				
	Reactive Sulfide	<50mg/kg	12/18/97		WB9985
	Reactive Cyanide	<1.0mg/kg	12/18/97		WB9974
TCLP	Arsenic	<0.5mg/l	12/18/97		MA9293
TCLP	Barium	1.4mg/l	12/18/97		MA9293
TCLP	Cadmium	<0.005mg/l	12/18/97		MA9293
TCLP	Chromium	<0.05mg/l	12/18/97		MA9293
TCLP	Lead	<0.1mg/l	12/18/97		MA9293
TCLP	Mercury	<0.0004mg/l	12/22/97		MA9296
TCLP	Selenium	<0.5mg/l	12/18/97		MA9293
TCLP	Silver	<0.05mg/l	12/18/97		MA9293
	TCL Volatiles by EPA Method 8240				
	Chloromethane	<4ug/kg dw	12/17/97		VM1719
	Bromomethane	<4ug/kg dw	12/17/97		VM1719
	Vinyl Chloride	<2ug/kg dw	12/17/97		VM1719
	Chloroethane	<4ug/kg dw	12/17/97		VM1719
	Methylene Chloride	<4ug/kg dw	12/17/97		VM1719
	Acetone	<12ug/kg dw	12/17/97		VM1719
	Carbon Disulfide	<4ug/kg dw	12/17/97		VM1719
	1,1-Dichloroethene	<4ug/kg dw	12/17/97		VM1719
	1,1-Dichloroethane	<4ug/kg dw	12/17/97		VM1719
	trans-1,2-Dichloroethene	<4ug/kg dw	12/17/97		VM1719
	cis-1,2-Dichloroethene	<4ug/kg dw	12/17/97		VM1719
	Chloroform	<4ug/kg dw	12/17/97		VM1719
	1,2-Dichloroethane	<4ug/kg dw	12/17/97		VM1719
	2-Butanone	<12ug/kg dw	12/17/97		VM1719
	1,1,1-Trichloroethane	<4ug/kg dw	12/17/97		VM1719
	Carbon Tetrachloride	<4ug/kg dw	12/17/97		VM1719
	Bromodichloromethane	<4ug/kg dw	12/17/97		VM1719
	1,2-Dichloropropane	<4ug/kg dw	12/17/97		VM1719
	cis-1,3-Dichloropropene	<4ug/kg dw	12/17/97		VM1719
	Trichloroethene	<4ug/kg dw	12/17/97		VM1719
	Dibromochloromethane	<4ug/kg dw	12/17/97		VM1719
	1,1,2-Trichloroethane	<4ug/kg dw	12/17/97		VM1719
	Benzene	<4ug/kg dw	12/17/97		VM1719

dw = Dry weight

DATE: 01/13/98

Upstate Laboratories, Inc.
Analysis Results
Report Number: 35097121
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC.
Sampled by: Client

APPROVAL:
QC:
Lab I.D.: 10170

LOCKHEED MARTIN
SOIL PILE 4 1615H 12/16/97 C

ULI I.D.: 35097121

Matrix: Soil

PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
trans-1,3-Dichloropropene	<4ug/kg dw	12/17/97		VM1719
Bromoform	<4ug/kg dw	12/17/97		VM1719
4-Methyl-2-pentanone	<12ug/kg dw	12/17/97		VM1719
2-Hexanone	<12ug/kg dw	12/17/97		VM1719
Tetrachloroethene	<4ug/kg dw	12/17/97		VM1719
1,1,2,2-Tetrachloroethane	<4ug/kg dw	12/17/97		VM1719
Toluene	<4ug/kg dw	12/17/97		VM1719
Chlorobenzene	<4ug/kg dw	12/17/97		VM1719
Ethylbenzene	<4ug/kg dw	12/17/97		VM1719
Styrene	<4ug/kg dw	12/17/97		VM1719
m-Xylene and p-Xylene	<4ug/kg dw	12/17/97		VM1719
o-Xylene	<4ug/kg dw	12/17/97		VM1719
PCB (Aroclors) by EPA Method 8080				
Aroclor 1016	<0.1mg/kg dw	12/20/97		PA3984
Aroclor 1221	<0.1mg/kg dw	12/20/97		PA3984
Aroclor 1232	<0.1mg/kg dw	12/20/97		PA3984
Aroclor 1242	<0.1mg/kg dw	12/20/97		PA3984
Aroclor 1248	<0.1mg/kg dw	12/20/97		PA3984
Aroclor 1254	<0.1mg/kg dw	12/20/97		PA3984
Aroclor 1260	<0.1mg/kg dw	12/20/97		PA3984
Total PCB	<0.1mg/kg dw	12/20/97		PA3984

dw = Dry weight

Attachment 6

Laboratory Reports for Water Samples

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

VOLATILE ANALYTICAL REPORT

Galson Laboratories

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC - Deere Rd.

Date Received : 09-DEC-97
Date Sampled : 09-DEC-97

Matrix : Water
Method : SW846 8260
Units : UG/L

Galson ID:	L40473-1	L40473-2	L40473-3
Client ID:	BAKER TANK NO. 77	BAKER TANK NO. NI352	TRIP BLANK
Vinyl Chloride	<10	<10	<10
Chloroethane	34.	16.	<10
1,1-Dichloroethane	56.	10	<5
1,2-Dichloroethene (total)	47.	12.	<5
1,1,1-Trichloroethane	10.	<5	<5
Trichloroethene	<5	<5	<5
Benzene	<5	<5	<5
Toluene	<5	7.	<5
Ethylbenzene	<5	<5	<5
Xylene (total)	<5	<5	<5
Dilution Factor	1	1	1
Analysis Date	12/10/97	12/10/97	12/10/97

Approved by : PJT
Date : 10-DEC-97
QC by : [signature]
Date : 12/10/97
NYS DOH # : 11626
Footnotes:

Galson Laboratories

VOLATILE ANALYTICAL REPORT

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC - Deere Rd.

Date Received : 09-DEC-97
Date Sampled : 09-DEC-97

Matrix : Water
Method : SW846 8260
Units : UG/L

Galson ID:	QCB121097-1
Client ID:	VBLK1

Vinyl Chloride	<10
Chloroethane	<10
1,1-Dichloroethane	<5
1,2-Dichloroethene (total)	<5
1,1,1-Trichloroethane	<5
Trichloroethene	<5
Benzene	<5
Toluene	<5
Ethylbenzene	<5
Xylene (total)	<5
Dilution Factor	1
Analysis Date	12/10/97

Approved by : PJT
Date : 10-DEC-97
QC by : EJ
Date : 12/10/97
NYS DOH # : 11626
Footnotes:

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: GALSON LABORATORIES Contract:

Lab Code: Case No.: 1 SAS No.: SDG No.: L40473

SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
VBLK1	83	86	78	BA1210	0
TRIP BLANK	86	91	81	BA1210	0
BAKER TANK NO. 77	85	91	87	BA1210	0
BAKER TANK NO. NI352	85	93	86	BA1210	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(54-114)
SMC2 (BFB) = Bromofluorobenzene	(50-128)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(54-123)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

METALS ANALYTICAL REPORT

Galson Laboratories

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC - Deere Rd.

Date Received : 09-DEC-97
Date Sampled : 09-DEC-97

Matrix : Water
Method : SW846 6010A/7470A

Galson ID:		L40473-1	L40473-2	QM971212-1
Client ID:		BAKER TANK NO. 77	BAKER TANK NO. NI352	BLANK
	Units			
Arsenic	mg/l	<0.01	<0.01	<0.01
Chromium	mg/l	<0.01	0.045	<0.01
Copper	mg/l	<0.02	<0.02	<0.02
Iron	mg/l	<0.1	0.11	<0.1
Lead	mg/l	<0.003	<0.003	<0.003
Nickel	mg/l	<0.04	<0.04	<0.04
Selenium	mg/l	<0.005	<0.005	<0.005
Silver	mg/l	<0.01	<0.01	<0.01
Thallium	mg/l	<0.01	<0.01	<0.01
Vanadium	mg/l	<0.03	<0.03	<0.03
Zinc	mg/l	<0.02	<0.02	<0.02

Approved by : Karen S. Becker
Date : 12-DEC-97
QC by : [signature]
Date : 12/12/97
NYS DOH # : 11626
Footnotes:

INORGANIC ANALYTICAL REPORT

Galson Laboratories

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC - Deere Rd.

Date Received : 09-DEC-97
Date Sampled : 09-DEC-97

Matrix : Water

Galson ID:			L40473-1	L40473-2
Client ID:			BAKER TANK NO. 77	BAKER TANK NO. NI352
	Method	Units		
pH *	EPA 150.1	SU	7.85	10.4
T. Dissolved Solids	160.1	mg/L	310	240

Approved by : LM
Date : 12-DEC-97
QC by : [signature]
Date : 12/12/97
NYS DOH # : 11626
Footnotes:
* "Overaged"; sample analyzed after 15 minute hold time.

GALSON LABORATORIES
6601 Kirkville Road East
E. Syracuse, NY 13057
315-432-0506
800-950-0506

Company Name: Blasland Bouck & Lee, Inc

Project Name / Number: LMC - Dewitt Rd. 3151.58 001

Turn-Around Time
☐ - Standard Service
☐ - * Rush Service 48 Hr.
Date requested by: 12/11/97
Ph # ( ) - 446 - 9120 ext 268
Fax # ( ) - 449 - 4111

Page 1 of 1

Send Report to: Pat Fair
Blasland Bouck & Lee, Inc.

Send Invoice to:

P.O. #

SAMPLE ID	Date	Time	TYPE Comp.	TYPE Grab	Aqueous	Soil	PARAMETERS FOR ANALYSIS * VOC's	Metals	pH / TDS
Baker Tank No. 77	12/9/97	1340		X			X	X	X
Baker Tank No. NI352	12/9/97	1400		X			X	X	X
Trip Blank	—	—					X		

Custody Record — Laboratory ID Number

Blasland, Bouck & Lee — L40473-3 — 12/09/97 Water — TRIP BLANK

REMARKS: For VOC's only do the 10 parameters stated by Pat Fair of BBL

Total Containers - 8 plus Trip Blank

SAMPLER'S NAME: Wayne DeFair SIGNATURE: Wayne DeFair

SAMPLES RELINQUISHED BY:		SAMPLES RECEIVED BY:	
NAME: Wayne DeFair	DATE: 12/9/97	NAME: Anne Lee Connelee	DATE: 12/9/97
SIGNATURE: Wayne DeFair	TIME: 1750	SIGNATURE:	TIME: 1750
NAME:	DATE:	Received For Laboratory By: (Signature)	DATE: TIME:
SIGNATURE:	TIME:		
NAME:	DATE:	Received For Laboratory By: (Signature)	DATE: TIME:
SIGNATURE:	TIME:		

VOC Pres U P AU NA

Custody Seal Intact? ☐ Yes ☐ No ☐ N.A.
Shipment Complete? ☐ Yes ☐ No

Temp _____ °C TS TB TM

Airbill #

Galson Laboratories

VOLATILE ANALYTICAL REPORT

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC-Court Street

Date Received : 18-DEC-97
Date Sampled : 18-DEC-97

Matrix : Water
Method : SW846 8260
Units : UG/L

Galson ID:	L40635-4	L40635-5	QCC122297-1
Client ID:	BAKER TANK #S1496	TRIP BLANK	Method Blank
Vinyl Chloride	28.	<10	<10
Chloroethane	<10	<10	<10
1,1-Dichloroethane	68.	<5	<5
1,2-Dichloroethene (total)	38.	<5	<5
1,1,1-Trichloroethane	<5	<5	<5
Trichloroethene	<5	<5	<5
Benzene	<5	<5	<5
Toluene	<5	<5	<5
Ethylbenzene	<5	<5	<5
Xylene (total)	<5	<5	<5
Dilution Factor	1	1	1
Analysis Date	12/22/97	12/22/97	12/22/97

Approved by : PJT
Date : 29-DEC-97
QC by : [signature]
Date : 12/30/97
NYS DOH # : 11626
Footnotes:

METALS ANALYTICAL REPORT

Galson Laboratories

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC-Court Street

Date Received : 18-DEC-97
Date Sampled : 18-DEC-97

Matrix : Water
Method : EPA 200.7

Galson ID:		L40635-1	L40635-2	L40635-3
Client ID:		BAKER TANK #82	BAKER TANK #EGS500EA	BAKER TANK #S1460
	Units			
Arsenic	mg/l	<0.005	<0.005	<0.005
Chromium	mg/l	<0.005	<0.005	<0.005
Copper	mg/l	<0.01	<0.01	<0.01
Iron	mg/l	<0.05	0.19	0.15
Lead	mg/l	<0.0015	<0.0015	<0.0015
Nickel	mg/l	<0.02	<0.02	<0.02
Selenium	mg/l	<0.0025	<0.0025	<0.0025
Silver	mg/l	<0.005	<0.005	<0.005
Thallium	mg/l	<0.005	<0.005	<0.005
Vanadium	mg/l	<0.015	<0.015	<0.015
Zinc	mg/l	<0.01	<0.01	<0.01

Approved by : Karen S. Becker
Date : 23-DEC-97
QC by :
Date : 12/22/97
NYS DOH # : 11626
Footnotes:

Galson Laboratories

METALS ANALYTICAL REPORT

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC-Court Street

Date Received : 18-DEC-97
Date Sampled : 18-DEC-97

Matrix : Water
Method : EPA 200.7

Galson ID:		L40635-4	QM971223-1
Client ID:		BAKER TANK #S1496	BLANK
	Units		
Arsenic	mg/l	<0.005	<0.01
Chromium	mg/l	<0.005	<0.01
Copper	mg/l	<0.01	<0.02
Iron	mg/l	1.1	<0.1
Lead	mg/l	<0.0015	<0.003
Nickel	mg/l	<0.02	<0.04
Selenium	mg/l	<0.0025	<0.005
Silver	mg/l	<0.005	<0.01
Thallium	mg/l	<0.005	<0.01
Vanadium	mg/l	<0.015	<0.03
[illegible]	mg/l	<0.01	<0.02

Approved by : Karen S. Becker
Date : 23-DEC-97
QC by : [signature]
Date : 12/30/97
NYS DOH # : 11626
Footnotes:

INORGANIC ANALYTICAL REPORT

Galson Laboratories

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC-Court Street

Date Received : 18-DEC-97 Matrix : Water
Date Sampled : 18-DEC-97

Galson ID:			L40635-1	L40635-2	L40635-3
Client ID:			BAKER TANK #82	BAKER TANK #EGS500EA	BAKER TANK #S1
	Method	Units			
pH *	EPA 150.1	SU	7.74	7.77	7.64
T. Dissolved Solids	160.1	mg/L	420	330	470

Approved by : LM
Date : 24-DEC-97
QC by : [signature]
Date : 12/30/97
NYS DOH # : 11626
Footnotes:
* "Overaged"; sample analyzed after 15 minute hold time.

Galson Laboratories

INORGANIC ANALYTICAL REPORT

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC-Court Street

Date Received : 18-DEC-97
Date Sampled : 18-DEC-97

Matrix : Water

Galson ID:			L40635-4
Client ID:			BAKER TANK #S1496
	Method	Units	
pH *	EPA 150.1	SU	7.52
T. Dissolved Solids	160.1	mg/L	570

Approved by : LM
Date : 24-DEC-97
QC by :
Date : 12/22/97
NYS DOH # : 11626
Footnotes:
* "Overaged"; sample analyzed after 15 minute hold time.

VOLATILE ANALYTICAL REPORT

Galson Laboratories

Client : Blasland, Bouck & Lee
Account # : 10624
Site : LMC-Court Street

Date Received : 18-DEC-97
Date Sampled : 18-DEC-97

Matrix : Water
Method : SW846 8260
Units : UG/L

Galson ID:	L40635-1	L40635-2	L40635-3
Client ID:	BAKER TANK #82	BAKER TANK #EGS500EA	BAKER TANK #S1460
Vinyl Chloride	7. J	<10	12.
Chloroethane	6. J	16.	<10
1,1-Dichloroethane	25.	36.	29.
1,2-Dichloroethene (total)	23.	25.	18.
1,1,1-Trichloroethane	4. J	8.	<5
Trichloroethene	<5	1. J	<5
Benzene	<5	<5	<5
Toluene	<5	<5	<5
Ethylbenzene	<5	<5	<5
Xylene (total)	<5	<5	<5
Dilution Factor	1	1	1
Analysis Date	12/22/97	12/22/97	12/22/97

Approved by : PJT
Date : 29-DEC-97
QC by : [signature]
Date : 12/30/97
NYS DOH # : 11626
Footnotes:
J : Estimated value. Value is below quantitation limit.

2A
WATER VOLATILE SURROGATE RECOVERY

Lab Name: GALSON LABORATORIES Contract:

Lab Code: Case No.: 1 SAS No.: SDG No.: L40635

SAMPLE NO.	SMC1 (TOL) #	SMC2 (BFB) #	SMC3 (DCE) #	OTHER	TOT OUT
Method Blank-QCC122297-1	97	99	89	CA1222	0
TRIP BLANK	103	92	90	CA1222	0
BAKER TANK #82	102	92	91	CA1222	0
BAKER TANK #EGS500EA	102	90	96	CA1222	0
BAKER TANK #S1460	101	92	90	CA1222	0
BAKER TANK #S1496	101	90	90	CA1222	0

	QC LIMITS
SMC1 (TOL) = Toluene-d8	(88-110)
SMC2 (BFB) = Bromofluorobenzene	(86-115)
SMC3 (DCE) = 1,2-Dichloroethane-d4	(76-114)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

GALSON LABORATORIES
6601 Kirkville Road East
E. Syracuse, NY 13057
315-432-0506
800-950-0506

Company Name: Blasland, Bouck & Lee, Inc.

Project Name / Number: LMC-Court St. 381.58.001

Turn-Around Time
☑ - Standard Service * Results by
☐ - * Rush Service
Date requested by: 1/2/98 - AM
Ph # ( ) - 446-9120 ext 268
Fax # ( ) - 449 4111

12/98 Page 1 of 1

Send Report to: Pat Farr/Wayne DeCarr
Blasland, Bouck & Lee, Inc.

Send Invoice to:

P.O. #

PARAMETERS FOR ANALYSIS

SAMPLE ID	Date	Time	TYPE Comp.	TYPE Grab	Aqueous	Soil	Other	Chain of Custody Record Laboratory Number	VOC's *	Metals	pH/TDS
Baker Tank No. 82	12/18	1530		X	X				X	X	X
Baker Tank No. EGS50CEA		1540		X	X				X	X	X
Baker Tank No. S1460		1550		X	X				X	X	X
Baker Tank No. S1496		1600		X	X				X	X	X
Trip Blank									X		

REMARKS: For VOC's only do the 10 site specific parameters stated previously by Pat Farr of BBL

Total Containers - 16 plus Trip blank

SAMPLER'S NAME: Wayne DeCarr SIGNATURE: Wayne DeCarr

SAMPLES RELINQUISHED BY:		SAMPLES RECEIVED BY:	
NAME: Wayne DeCarr DATE: 12/18/97		NAME: DATE:	
SIGNATURE: Wayne DeCarr TIME: 510 pm		SIGNATURE: TIME:	
NAME: DATE:		Received For Laboratory By: DATE:	
SIGNATURE: TIME:		(Signature) TIME:	
NAME: DATE:		Received For Laboratory DATE: 12/18/97	
SIGNATURE: TIME:		(Signature) Kathy Sake TIME: 510 pm	

VOC Pres U P AU NA

Custody Seal Intact? ☐ Yes ☐ No ☐ N.A.

Shipment Complete? ☐ Yes ☐ No

Temp ____ ° C TS TB TM

Airbill #

DATE: 11/28/97

Upstate Laboratories, Inc.
nalysis Results
eport Number: 32597150
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC.
Sampled by: Client

APPROVAL: AS
QC: PF
Lab I.D.: 10170
LOCKHEED MARTIN
FRAC TANKER 1 1445H 11/21/97 G

ULI I.D.: 32597150 Matrix: Water

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	pH	7.6SU	11/21/97	17	WB7797
	Total Dissolved Solids	325mg/l	11/21/97		WB9693
Total	Arsenic by furnace method	0.002mg/l	11/24/97		MA9193
Total	Chromium	0.01mg/l	11/24/97		MA9192
Total	Copper	<0.02mg/l	11/24/97		MA9192
Total	Iron	0.52mg/l	11/24/97		MA9192
Total	Lead	<0.003mg/l	11/24/97		MA9192
Total	Nickel	<0.01mg/l	11/24/97		MA9192
Total	Selenium by furnace method	0.001mg/l	11/22/97		MA9188
Total	Silver	0.03mg/l	11/24/97		MA9192
Total	Thallium by furnace method	<0.003mg/l	11/22/97		MA9187
Total	Vanadium	0.08mg/l	11/24/97		MA9192
Total	Zinc	0.01mg/l	11/24/97		MA9192
	TCL Volatiles by EPA Method 8240				
	Vinyl Chloride	110ug/l	11/24/97		VM1686
	Chloroethane	<3ug/l	11/24/97		VM1686
	1,1-Dichloroethane	130ug/l	11/24/97		VM1686
	trans-1,2-Dichloroethene	<3ug/l	11/24/97		VM1686
	cis-1,2-Dichloroethene	240ug/l	11/24/97		VM1686
	1,1,1-Trichloroethane	8ug/l	11/24/97		VM1686
	Trichloroethene	<3ug/l	11/24/97		VM1686
	Benzene	<3ug/l	11/24/97		VM1686
	Toluene	5ug/l	11/24/97		VM1686
	Ethylbenzene	6ug/l	11/24/97		VM1686
	m-Xylene and p-Xylene	3ug/l	11/24/97		VM1686
	o-Xylene	3ug/l	11/24/97		VM1686

DATE: 11/28/97

Upstate Laboratories, Inc.
\nalysis Results
<eport Number: 32897058
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC.
Sampled by: Client

APPROVAL: QS
QC: PF
Lab I.D.: 10170

LOCKHEED MARTIN
FRAC TANKER 2 1045H 11/24/97 G

ULI I.D.: 32897058

Matrix: Water

	PARAMETERS	RESULTS	DATE ANAL.	KBY	FILE#
	pH	7.3SU	11/24/97	17	WB7797
	Total Dissolved Solids	270mg/l	11/25/97		WB9710
Total	Arsenic by furnace method	0.003mg/l	11/24/97		MA9193
Total	Chromium	0.01mg/l	11/24/97		MA9192
Total	Copper	0.04mg/l	11/24/97		MA9192
Total	Iron	1.9mg/l	11/24/97		MA9192
Total	Lead	0.007mg/l	11/25/97		MA9194
Total	Nickel	<0.01mg/l	11/24/97		MA9192
Total	Selenium by furnace method	<0.001mg/l	11/25/97		MA9198
Total	Silver	0.03mg/l	11/24/97		MA9192
Total	Thallium by furnace method	<0.003mg/l	11/25/97		MA9187
Total	Vanadium	0.08mg/l	11/24/97		MA9192
Total	Zinc	0.08mg/l	11/24/97		MA9192
	TCL Volatiles by EPA Method 8240				
	Vinyl Chloride	44ug/l	11/24/97		VM1686
	Chloroethane	<3ug/l	11/24/97		VM1686
	1,1-Dichloroethane	110ug/l	11/24/97		VM1686
	trans-1,2-Dichloroethene	<3ug/l	11/24/97		VM1686
	cis-1,2-Dichloroethene	120ug/l	11/24/97		VM1686
	1,1,1-Trichloroethane	6ug/l	11/24/97		VM1686
	Trichloroethene	<3ug/l	11/24/97		VM1686
	Benzene	<3ug/l	11/24/97		VM1686
	Toluene	21ug/l	11/24/97		VM1686
	Ethylbenzene	<3ug/l	11/24/97		VM1686
	m-Xylene and p-Xylene	3ug/l	11/24/97		VM1686
	o-Xylene	<3ug/l	11/24/97		VM1686

DATE: / /

Upstate Laboratories, Inc.
Analysis Results
Report Number: 33097174
Client I.D.: LAIDLAW ENV. SVCS. (NE), INC.
Sampled by: Client

APPROVAL: PFE
QC: LW/DWJ SS
Lab I.D.: 10170
LOCKHEED MARTIN CORP
COURT STREET SOIL PILE 1 1400H 11/26/97 C

ULI I.D.: 33097174 Matrix: Soil

	PARAMETERS	RESULTS	DATE ANAL.	KEY	FILE#
	pH	7.96U	12/03/97		WB9793
	Flash Point	>60degC	12/02/97		WB9781
	Total Solids	80%	11/26/97		WB9747
	RCRA Reactivity				
	Reactive Sulfide	<50mg/kg	12/02/97		WB9763
	Reactive Cyanide	<1.0mg/kg	12/02/97		WB9759
TCLP	Arsenic	<0.5mg/l	11/02/97		MA9214
TCLP	Barium	2.0mg/l	12/02/97		MA9214
TCLP	Cadmium	<0.005mg/l	12/02/97		MA9214
TCLP	Chromium	<0.05mg/l	12/02/97		MA9214
TCLP	Lead	<0.1mg/l	12/02/97		MA9214
TCLP	Mercury	<0.0004mg/l	12/03/97		MA9220
TCLP	Selenium	<0.5mg/l	12/02/97		MA9214
TCLP	Silver	<0.05mg/l	12/02/97		MA9214
	TCL Volatiles by EPA Method 8240				
	Chloromethane	<4ug/kg dw	12/04/97		VM1701
	Bromomethane	<4ug/kg dw	12/04/97		VM1701
	Vinyl Chloride	<3ug/kg dw	12/04/97		VM1701
	Chloroethane	<4ug/kg dw	12/04/97		VM1701
	Methylene Chloride	5ug/kg dw	12/04/97	44	VM1701
	Acetone	<13ug/kg dw	12/04/97		VM1701
	Carbon Disulfide	<4ug/kg dw	12/04/97		VM1701
	1,1-Dichloroethene	<4ug/kg dw	12/04/97		VM1701
	1,1-Dichloroethane	<4ug/kg dw	12/04/97		VM1701
	trans-1,2-Dichloroethene	<4ug/kg dw	12/04/97		VM1701
	cis-1,2-Dichloroethene	<4ug/kg dw	12/04/97		VM1701
	Chloroform	<4ug/kg dw	12/04/97		VM1701
	1,2-Dichloroethane	<4ug/kg dw	12/04/97		VM1701
	2-Butanone	<13ug/kg dw	12/04/97		VM1701
	1,1,1-Trichloroethane	<4ug/kg dw	12/04/97		VM1701
	Carbon Tetrachloride	<4ug/kg dw	12/04/97		VM1701
	Bromodichloromethane	<4ug/kg dw	12/04/97		VM1701
	1,2-Dichloropropane	<4ug/kg dw	12/04/97		VM1701
	cis-1,3-Dichloropropene	<4ug/kg dw	12/04/97		VM1701
	Trichloroethene	<4ug/kg dw	12/04/97		VM1701
	Dibromochloromethane	<4ug/kg dw	12/04/97		VM1701
	1,1,2-Trichloroethane	<4ug/kg dw	12/04/97		VM1701

dw = Dry weight