

60313

**Environmental Permits Report**  
for  
**Site 1**  
**Air Sparging/Vapor Extraction**  
**System**  
**Naval Weapons Industrial Reserve**  
**Plant (NWIRP)**  
Bethpage, New York



Northern Division  
Naval Facilities Engineering Command  
Contract Number N62472-90-D-1298  
Contract Task Order 0213

June 1995

**C F Braun Engineering Corporation**

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**ENVIRONMENTAL PERMITS REPORT  
FOR  
SITE 1  
AIR SPARGING / VAPOR EXTRACTION SYSTEM  
FOR  
NAVAL WEAPONS INDUSTRIAL RESERVE PLANT (NWIRP)  
BETHPAGE, NEW YORK**

**COMPREHENSIVE LONG-TERM  
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:  
Northern Division  
Environmental Branch Code 18  
Naval Facilities Engineering Command  
10 Industrial Highway, Mall Stop #82  
Lester, Pennsylvania 19113-2090**

**Submitted by:  
C F Braun Engineering Corporation  
993 Old Eagle School Road, Suite 415  
Wayne, Pennsylvania 19087-1710**

**CONTRACT NUMBER N62472-90-D-1298  
CONTRACT TASK ORDER 0213**

**JUNE 1995**

**PREPARED BY:**

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## 1.0 INTRODUCTION

This Environmental Permits Report (Report) was prepared under Contract Task Order (CTO) 0213, of the Comprehensive Long-Term Environmental Action Navy (CLEAN), Contract Number N62472-90-D-1298. Under CTO 0213 C F Braun Engineering Corporation is performing engineering, design, and post construction award services for the phase two remedial action at Site 1 - Former Drum Marshaling Area and beneath Plant Number 3 at the Naval Weapons Industrial Reserve Plant (NWIRP) Bethpage, New York.

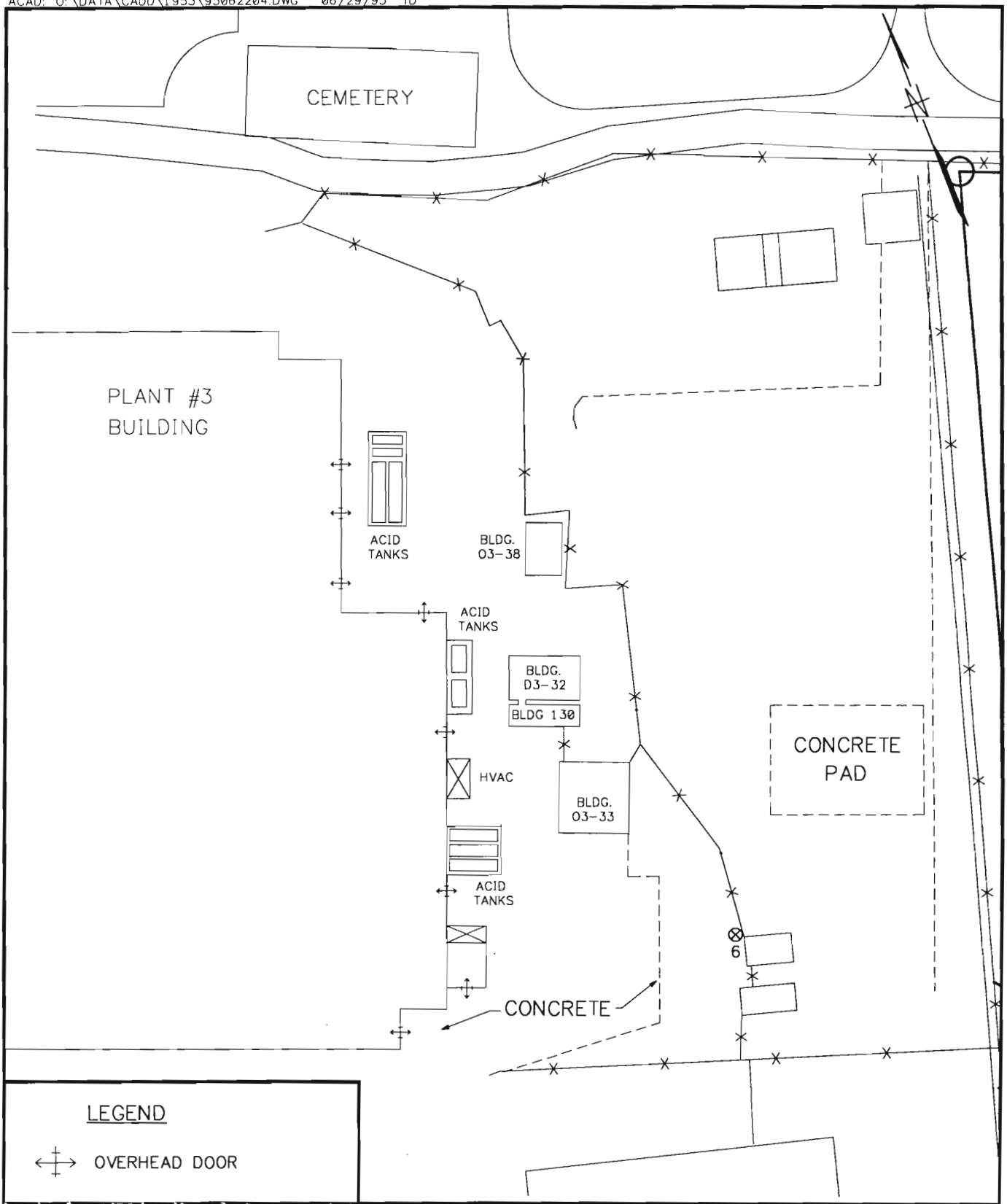
### 1.1 BACKGROUND INFORMATION

#### 1.1.1 Site 1 - Former Drum Marshaling Area

Site 1 occupies an area of approximately 4 acres. It is surrounded on three sides by a fence and on the fourth side by Plant No. 3. The site is also bisected by a fence running north-south. To the west of this fence, the surface consists primary of concrete. Bulk chemical storage tanks are also present, abutting Plant No. 3. To the east of this bisecting fence, the surface is earth, gravel, or grass. The northeastern part of the site is slightly elevated (4 feet), well vegetated and well maintained. The majority of the investigation at Site 1 occurred in the southeastern portion of the site. A vegetated wind row (pine) and fence are present along the eastern edge of the site to reduce community visibility. A site layout map is provided in Figure 1.

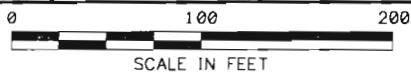
From the early 1950's through the late 1970's, drums containing liquid wastes were stored on a cinder-covered area on Site 1. In the late 1970's this drum marshaling area was relocated a few yards south of this cinder-covered site to a 100 ft x 100 ft concrete pad. This concrete pad was uncovered and did not have any spill containment berms. Drum storage on this concrete pad was terminated in 1982, when all waste containers were relocated to the covered Salvage Storage Area (Site 3).

Approximately 200 to 300 drums were stored at Site 1 at any given time between the early 1950's and the early 1980's. Liquid wastes contained in the drums included halogenated and nonhalogenated solvents, and liquids containing concentrations of cadmium and cyanide.



**SITE 1**  
**SITE LAYOUT MAP**  
**NWIRP, BETHPAGE, NEW YORK**

**FIGURE 1**



**C.F. BRAUN**

The soils at Site 1 were found to contain elevated concentrations of chlorinated solvents such as PCE (4.8 mg/kg), PCBs (1,470 ppm) and metals (arsenic: 3,380 ppm). In addition, PAHs, and other semivolatile organics and metals were found at concentrations greater than background levels. Solvents were detected in both subsurface and surface soils throughout Site 1. The higher concentrations were found in the subsurface soils near the former drum marshaling pad. The other contaminants were found throughout the surface soils at Site 1, indicating widespread surface soil contamination.

The soils at Site 1 contain sufficient residual volatile organic contamination to confirm the source of groundwater contamination as being near or at the former drum marshaling areas. However, based on observed groundwater contamination patterns, there are potentially other source areas at the NWIRP. The groundwater at Site 1 was found to contain elevated concentrations of chlorinated solvents (such as TCE - 1.1 mg/L, PCE - 3.6 mg/L, and TCA - 10 mg/L). Contaminated groundwater from Site 1 extends south and west to approximately the Long Island Railroad, at which point it reaches a depth of approximately 200 feet below ground surface (bgs). Computer modeling performed during the remedial investigation indicates that the contaminated groundwater plume may continue further south both laterally and vertically and eventually be intercepted by Grumman production wells.

Several inorganics (in unfiltered samples) were found at concentrations greater than drinking water criteria, including cadmium (392 µg/L), chromium (169 µg/L), and lead (134 µg/L). The chromium and cadmium results are from a monitoring well considered upgradient of Site 1, although based on the location of the well and the activities at the site, these results could potentially result from Site 1 activities. For filtered samples, inorganics were also detected at concentrations greater than drinking water criteria, including cadmium (91 µg/L) and chromium (56.7 µg/L).

## 1.2 PURPOSE

This report identifies the applicable permits, filing procedures, and filing costs required to complete the remedial action outlined in Section 2.0.

## 2.0 PROPOSED REMEDIAL ACTION

### 2.1 REMEDIAL ACTION OBJECTIVE

Subsurface soil and groundwater at Site 1 are contaminated with VOCs. Analytical results for soil and groundwater samples collected during the Remedial Investigation at Site 1 indicate that there are contaminant concentrations which exceed the established Preliminary Remediation Goals (PRGs) and Maximum Contaminant Levels (MCLs) for soil and groundwater, respectively. An air sparging vapor extraction (ASVE) system will be installed and operated at Site 1 in order to reduce subsurface contaminant concentrations to established PRGs and MCLs.

### 2.2 TREATMENT DESCRIPTION

In order to obtain the necessary information required to design a full scale ASVE system, a pilot scale ASVE system will be installed and operated.

The following steps shall be taken during installation and operation of the ASVE systems in order to achieve the treatment objective.

- **General Site Preparation:** The section of Site 1 that will contain air injection and air extraction wells for both the pilot scale and full scale ASVE systems will be cleared of all surface debris prior to installation of the systems. Only minimal clearing activities are anticipated as the area of concern is relatively free of debris. A pilot-scale ASVE system will then be installed and operated for approximately two months to acquire system design parameters. Using this information a full scale system will be designed and subsequently installed.
- **Well Installation:** Two-inch-diameter PVC, air injection and air extraction wells will be installed in the treatment area by using standard hollow-stem drilling procedures. Injection wells will be installed into the top 10-foot portion of the aquifer. On average, the air injection wells will extend approximately 60 feet below the ground surface. Only the sections of the injection wells that penetrate the aquifer will be screened. The air extraction wells will not



penetrate the aquifer. Extraction wells will be nested (three wells per nest) and will vary in depth.

- **Soil Borings:** Soil borings will be completed at Site 1 in order to collect soil samples during installation of the pilot-scale system. Split- spoon samples will be collected from each of the borings at the surface, the middle and at the upper interface of the shallow aquifer.
- **System Operation:** A pilot-scale ASVE system will be installed and operated for 2 months to acquire the necessary information to design a full-scale system. Air injection and air extraction blowers will operate continuously during the operation of the system. Subsurface air collected by the extraction wells will be passed through primary and secondary water separators before being treated by activated carbon filtration. Treated air will be passed into the atmosphere following carbon treatment. Injected and extracted air will be periodically sampled from various points along the flow lines, and the necessary system adjustments will be made in order to comply with all established Federal, state and local operating parameters. Operation of the full scale system will be performed in a similar manner.

### 3.0 REQUIRED DOCUMENTATION

Table 3-1 presents a Project Documentation Checklist that contains an evaluation of Federal, state and local permits, licenses and certificates that may be applied to in-situ treatment of VOC contamination at Site 1 by an ASVE system. Based on this evaluation the following conclusions may be made:

No filing fees will be required in order to operate the pilot-scale ASVE system at Site 1, however the full-scale ASVE system will require the filing of an air permit with the state of New York Department of Environmental Conservation.

#### 3.1 FEDERAL REQUIREMENTS

Off-gas emissions generated during operation of the soil vapor extraction unit will be regulated by the Federal new source performance standards contained in 40 CFR Part 60, and the national emissions standards for hazardous air pollutants contained in 40 CFR Part 61. No Federal permits will be required for this project.

#### 3.2 STATE REQUIREMENTS

Off-gas emissions generated during operation of the air sparging/vapor extraction unit will be regulated by the New York State Department of Environmental Conservation regulations for prevention and control of air contamination and air pollution contained in Title 6, Chapter III, Subchapter A; and the air quality classifications for Nassau County are contained in Title 6, Chapter III, Subchapter C, Part 287. The pilot-scale ASVE system will be operated for approximately 2 months. A permit application does not need to be submitted for the pilot-scale phase of the project. A letter from the New York State Department of Environmental Conservation which indicates that a permit is not required for the pilot-scale system is provided in Attachment A.

The full-scale ASVE system will require a permit application and will need to be submitted as part of the design reports. Guidance for applying for this application is provided in the New York State Department of Environmental Conservation Document 76-11-12 (3-80) "Instructions for the preparation and submission of an application for a Permit to Construct or a Certificate to Operate: Processes, Exhaust and/or Ventilation Systems." An example of the permit is provided in Attachment B.

TABLE 3-1  
 PROJECT DOCUMENTATION CHECKLIST - SITE 1  
 BETHPAGE, NEW YORK

| Activity                                      | Permit/License/Certification   | Issuing Agency      | Applicability  | Reason  |
|---|--|---------------------|----------------|---|
| Stationary Air Emission Source                | Permit to Construct/Permit-to-Operate                                    | State               | Applicable     | Air emission of regulated wastes will be maintained below established levels. (See Section 4.0).            |
| Hazardous Air Pollutant (HAP) Emission Source | HAP Emission Statement   | State               | Applicable     | Air emissions of hazardous air pollutants will be maintained below established limits. (See Section 4.0).   |
| Floodplain Management Regulations Development | Development Permit   | State               | Not Applicable | Excavation will not occur in the 100-year floodplain. A permit is not required.                             |
| Wastewater Discharge to "Waters of the U.S."  | Permit-to-Discharge (SPDES or NPDES)                                     | State or EPA        | Not Applicable | NPDES or SPDES permits will not be required. Wastewaters will not be disposed of at the existing base WWTP. |
| Wastewater Discharge to Sewer                 | Sewer-Use Permit   | State or Local      | Not Applicable | No wastewater discharges to a public sewer system will occur.   |
| Potable Water Treatment                       | Permit-to-Operate  | State               | Not Applicable | Water is not being treated for potable use.   |
| Underground Injection for Waste Disposal      | Permit-to-Operate  | State or EPA        | Not Applicable | Underground Injection will not be performed.  |
| Ocean Dumping                                 | Permit-to-Dump   | EPA                 | Not Applicable | Ocean Dumping will not be performed.  |
| Dredging                                      | Dredge-Fill Permit<br>Ocean Disposal Permit<br>State Water Quality Cert. | COE<br>COE<br>State | Not Applicable | Dredging is not being performed.  |
| Structure in Navigable Waters                 | Section 10 Permit  | COE                 | Not Applicable | Structures are not being built in navigable waters.   |

TABLE 3-1 (Continued)  
PROJECT DOCUMENTATION CHECKLIST - SITE 1  
BETHPAGE, NEW YORK

| Activity                                     | Permit/License/Certification  | Issuing Agency | Applicability  | Reason   |
|--|---|----------------|----------------|--|
| Stormwater Discharge to "Waters of the U.S." | Permit-to-Construct/Modify Source                                       | State          | Not Applicable | No stormwater will be discharged to "Waters of the U.S."                                       |
| Earth-Moving Operations                      | Permit to Construct/Erosion and Sediment Control Plan                   | State          | Not Applicable | Site 1 construction will disturb less than the 5-acre limit specified by New York regulations. |
| Fill Wetlands                                | Dredge/Fill Permit<br>State Water Quality Cert.<br>State Wetland Permit | COE<br>State   | Not Applicable | The project is not proposing to fill in a wetlands area.                                       |
| Hazardous and Non-Hazardous Waste Landfills  | Permit-to-Operate   | State          | Not Applicable | A hazardous waste landfill is not being constructed or operated.                               |
| Hazardous Waste Generation                   | EPA Identification Number   | State          | Not Applicable | No hazardous waste will be generated during operation of the AS/SVE system at Site 1.          |
| Waste Transport (VOC-contaminated waste)     | Form 8700-22  | EPA or State   | Not Applicable | No hazardous waste will be transported from Site 1.  |
| Disposal of VOC-contaminated soil            | Notification of Authorization of Disposal<br>Certification of Disposal  | State          | Not Applicable | No contaminated wastes will be disposed of off site.   |
| Hazardous Waste Treatment, Storage, Disposal | Permit-to-Construct<br>Permit-to-Operate<br>(Part B Permit)             | State or EPA   | Not Applicable | The generator is not operating a treatment, storage, or disposal facility.                     |
| Underground Storage Tanks                    | Permit-to-Construct<br>Permit-to-Operate                                | State or EPA   | Not Applicable | No underground tanks exist within this project area.   |
| Pesticide Application                        | Applicator Certification  | DOD            | Not Applicable | Pesticides will not be used.   |

### 3.3 LOCAL REQUIREMENTS

No local regulations are applicable to the installation and operation of an ASVE system at the NWIRP Bethpage, New York.

## 4.0 COMPLIANCE

### 4.1 AIR EMISSIONS

The ASVE systems to be installed will volatilize and remove VOCs from the soil and groundwater at Site 1. Air containing concentrations of VOCs will be passed through granular activated carbon (GAC) treatment system prior to emission to the atmosphere. The carbon treatment canisters will be placed in series so that contamination breakthrough from the primary carbon canister can be detected. The air inlet and outlet lines from the GAC canisters will be periodically monitored to assure compliance with the state emissions limits for VOCs listed below.

The degree of air cleaning required for process emission sources emitting volatile organic compounds in the New York City Metropolitan Area<sup>(1)</sup> is shown below:

**EMISSION RATE POTENTIAL (lb/hr)**

| Environmental Rating | Less than 1.0             | 1.0 to 3.5   | Greater than 3.5                                    |
|----------------------|---------------------------|--|---|
| A                    | <fn>                      | 99% or greater or best available control technology. | 99% or greater or best available control technology |
| B or C               | <fn>                      | <fn>   | Reasonably available control technology             |
| D                    | No air cleaning required. | No Air cleaning required.                            | Reasonably available control technology.            |

(1) Source: New York State Department of Environmental Conservation, Title 6, Chapter III, Subchapter A, Section 212.

<fn> Degree of air cleaning required will be specified by the commissioner.

#### Environmental Rating

#### Criteria

- A An air contaminant whose discharge results, or may result, in a serious adverse effect on receptors or the environment. These effects may be of a health, economic or aesthetic nature or any combination of these.
- B An air contaminant whose discharge results, or may result in only moderate and essentially localized effects; or where the multiplicity of sources of the contaminant in any given area require an overall reduction of the atmospheric burden of that contaminant.
- C An air contaminant whose discharge may result in localized adverse effects of an aesthetic or nuisance nature.
- D An air contaminant whose discharge will not result in measurable or observable effects on receptors, nor add to an existing or predictable atmospheric burden of that contaminant which may cause adverse effects considering properties and concentrations of the emissions, isolated conditions, stack height and other factors.

Procedures for maintaining air emissions from the ASVE systems to within these established limits will be provided in the Air Monitoring section of the Pilot-Scale Work Plan.

A conservative estimated VOC emission rates for the pilot scale system (prior to carbon treatment) is 2 lb/day. Treatment efficiencies are anticipated to be approximately 99%. Information obtained during the installation and operation of the pilot-scale system will be used to further define the estimated operating parameters for the full scale system.

**ATTACHMENT A**

**NYSDEC LETTER DATED APRIL 5, 1995**





Michael D. Zagata  
Commissioner

April 5, 1995

Mr. David Brayack, P.E.  
Halliburton NUS Environmental Corporation  
661 Anderson Drive  
Pittsburgh, PA 11501-4250

RE: NWIRP-Bethpage  
Calverton-NWIRP  
Site Numbers: 130003B 152136

Dear Mr. Brayack:

Enclosed please find three (3) copies of the permit form for a Process, Exhaust or Ventilation System along with a copy of the instruction manual.

A permit application need not be submitted for the soil vapor extraction pilot test programs at the above-referenced sites as long as there is a treatment system in place (such as a vapor phase granular activated carbon system) at each site. A permit application will be required for each site as part of the design reports for the full-scale soil vapor extraction systems.

If you have any questions regarding this matter, please feel free to contact me at (518) 457-3395 or Jeff McCullough at (518) 457-3976.

Very truly yours,

A handwritten signature in cursive that reads "John D. Barnes".

John D. Barnes, P.E.  
Environmental Engineer 2  
Bureau of Eastern Remedial Action  
Div. of Hazardous Waste Remediation

cc: S. Ervolina  
S. McCormick  
M. Chen  
J. McCullough  
J. Colter (Navy)

**ATTACHMENT B**

**NYSDEC PROCESS, EXHAUST OR VENTILATION SYSTEM FORM**



| OP | LOCATION | FACILITY | EMISSION POINT |
|----|----------|----------|----------------|
|    |          |          |                |

PROCESS, EXHAUST OR VENTILATION SYSTEM

APPLICATION FOR PERMIT TO CONSTRUCT OR CERTIFICATE TO OPERATE

A ADD  
C CHANGE  
D DELETE

READ INSTRUCTIONS  
CONTAINED IN  
FORM 76-11-12  
BEFORE ANSWERING  
ANY QUESTION

|                                 |  |  |  |  |  |   |                   |   |  |   |   |                            |  |                             |  |                          |  |
|---------------------------------|--|--|--|--|--|---|-------------------|---|--|---|---|----------------------------|--|-----------------------------|--|--------------------------|--|
| S<br>E<br>C<br>T<br>I<br>O<br>N | 1. NAME OF OWNER / FIRM  |  |  | 9. NAME OF AUTHORIZED AGENT  |  |   | 10. TELEPHONE     |   | 19. FACILITY NAME (IF DIFFERENT FROM OWNER / FIRM) |   |   |                            |  |                             |  |                          |  |
|                                 | 2. NUMBER AND STREET ADDRESS   |  |  | 11. NUMBER AND STREET ADDRESS  |  |   |                   |   |  | 20. FACILITY LOCATION (NUMBER AND STREET ADDRESS) |   |                            |  |                             |  |                          |  |
|                                 | 3. CITY - TOWN - VILLAGE   |  |  | 4. STATE   |  | 5. ZIP  |                   | 12. CITY - TOWN - VILLAGE                           |  | 13. STATE   |   | 14. ZIP                    |  | 21. CITY - TOWN - VILLAGE   |  | 22. ZIP                  |  |
|                                 | 6. OWNER CLASSIFICATION  |  |  | E. <input type="checkbox"/> STATE  |  | H. <input type="checkbox"/> HOSPITAL  |                   | 15. NAME OF P.E. OR ARCHITECT PREPARING APPLICATION |  | 16. N.Y.S. P.E. OR ARCHITECT LICENSE NO.          |   | 17. TELEPHONE              |  | 23. BUILDING NAME OR NUMBER |  | 24. FLOOR NAME OR NUMBER |  |
|                                 | A. <input type="checkbox"/> COMMERCIAL C. <input type="checkbox"/> UTILITY F. <input type="checkbox"/> MUNICIPAL I. <input type="checkbox"/> RESIDENTIAL |  |  | B. <input type="checkbox"/> INDUSTRIAL D. <input type="checkbox"/> FEDERAL G. <input type="checkbox"/> EDUC. INST. J. <input type="checkbox"/> OTHER |  |   | 25. START UP DATE |   | 26. DRAWING NUMBERS OF PLANS SUBMITTED             |   |   |                            |  |                             |  |                          |  |
|                                 | 7. NAME & TITLE OF OWNERS REPRESENTATIVE   |  |  | 8. TELEPHONE   |  | 18. SIGNATURE OF OWNERS REPRESENTATIVE OR AGENT WHEN APPLYING FOR A PERMIT TO CONSTRUCT |                   |   |  | 27. PERMIT TO CONSTRUCT                           |   | 28. CERTIFICATE TO OPERATE |  |                             |  |                          |  |
|                                 |  |  |  |  |  |   |                   |   | A. <input type="checkbox"/> NEW SOURCE             |   | B. <input type="checkbox"/> MODIFICATION    |                            |  |                             |  |                          |  |
|                                 |  |  |  |  |  |   |                   |   | B. <input type="checkbox"/> MODIFICATION           |   | C. <input type="checkbox"/> EXISTING SOURCE |                            |  |                             |  |                          |  |

|                                 |                        |                            |                                   |                        |                             |                     |                             |                           |                 |               |               |                           |        |        |      |
|---------------------------------|------------------------|----------------------------|-----------------------------------|------------------------|-----------------------------|---------------------|-----------------------------|---------------------------|-----------------|---------------|---------------|---------------------------|--------|--------|------|
| S<br>E<br>C<br>T<br>I<br>O<br>N | 29. EMISSION POINT ID. | 30. GROUND ELEVATION (FT.) | 31. HEIGHT ABOVE STRUCTURES (FT.) | 32. STACK HEIGHT (FT.) | 33. INSIDE DIMENSIONS (IN.) | 34. EXIT TEMP. (°F) | 35. EXIT VELOCITY (FT./SEC) | 36. EXIT FLOW RATE (ACFM) | 37. SOURCE CODE | 38. HRS / DAY | 39. DAYS / YR | 40. % OPERATION BY SEASON |        |        |      |
|                                 |                        |                            |                                   |                        |                             |                     |                             |                           |                 |               |               | Winter                    | Spring | Summer | Fall |

|                                 |                          |    |    |
|---------------------------------|--------------------------|----|----|
| S<br>E<br>C<br>T<br>I<br>O<br>N | DESCRIBE PROCESS OR UNIT | 1. | 2. |
|                                 |                          | 3. | 4. |
|                                 |                          | 5. | 6. |
|                                 |                          | 7. | 8. |
|                                 |                          |    |    |
|                                 |                          |    |    |
|                                 |                          |    |    |
|                                 |                          |    |    |

| EMISSION CONTROL EQUIPMENT ID. | CONTROL TYPE | MANUFACTURER'S NAME AND MODEL NUMBER |     |     | DISPOSAL METHOD | DATE INSTALLED MONTH / YEAR | USEFUL LIFE |
|--------------------------------|--------------|--------------------------------------|-----|-----|-----------------|-----------------------------|-------------|
| 42.                            | 43.          | 44.                                  | 45. | 46. | 47.             |                             |             |
| 48.                            | 49.          | 50.                                  | 51. | 52. | 53.             |                             |             |

CALCULATIONS

| CONTAMINANT | NAME | CAS NUMBER | INPUT OR PRODUCTION | UNIT | ENV. RATING | EMISSIONS |      |         |             | % CONTROL EFFIC'CY | HOURLY EMISSIONS (LBS/HR) |        | ANNUAL EMISSIONS (LBS/YR) |                 |             |
|-------------|------|------------|---------------------|------|-------------|-----------|------|---------|-------------|--------------------|---------------------------|--------|---------------------------|-----------------|-------------|
|             |      |            |                     |      |             | ACTUAL    | UNIT | HOW DET | PERMISSIBLE |                    | ERP                       | ACTUAL | ACTUAL                    | 10 <sup>x</sup> | PERMISSIBLE |
| 54.         |      | 55.        | 56.                 | 57.  | 58.         | 59.       | 60.  | 61.     | 62.         | 63.                | 64.                       | 65.    | 66.                       | 67.             | 68.         |
| 69.         |      | 70.        | 71.                 | 72.  | 73.         | 74.       | 75.  | 76.     | 77.         | 78.                | 79.                       | 80.    | 81.                       | 82.             | 83.         |
| 84.         |      | 85.        | 86.                 | 87.  | 88.         | 89.       | 90.  | 91.     | 92.         | 93.                | 94.                       | 95.    | 96.                       | 97.             | 98.         |
| 99.         |      | 100.       | 101.                | 102. | 103.        | 104.      | 105. | 106.    | 107.        | 108.               | 109.                      | 110.   | 111.                      | 112.            | 113.        |
| 114.        |      | 115.       | 116.                | 117. | 118.        | 119.      | 120. | 121.    | 122.        | 123.               | 124.                      | 125.   | 126.                      | 127.            | 128.        |
| 129.        |      | 130.       | 131.                | 132. | 133.        | 134.      | 135. | 135.    | 137.        | 138.               | 139.                      | 140.   | 141.                      | 142.            | 143.        |

| TYPE | SOLID FUEL TONS / YR |      | LIQUID FUEL THOUSANDS OF GALLONS/YR |      | GAS THOUSANDS OF CF/YR |      | BTU/CF | APPLICABLE RULE | APPLICABLE RULE |
|------|----------------------|------|-------------------------------------|------|------------------------|------|--------|-----------------|-----------------|
|      | 144.                 | 145. | 146.                                | 147. | 148.                   | 149. |        |                 |                 |
|      |                      |      |                                     |      |                        |      |        | 153.            | 154.            |

Upon completion of construction sign the statement listed below and forward to the appropriate field representative

THE PROCESS, EXHAUST OR VENTILATION SYSTEM HAS BEEN CONSTRUCTED AND WILL BE OPERATED IN ACCORDANCE WITH STATED SPECIFICATIONS AND IN CONFORMANCE WITH ALL PROVISIONS OF EXISTING REGULATIONS.

155. SIGNATURE OF AUTHORIZED REPRESENTATIVE OR AGENT \_\_\_\_\_ DATE \_\_\_\_\_

|                    |                       |                 |                 |                 |                          |                          |                   |
|--------------------|-----------------------|-----------------|-----------------|-----------------|--------------------------|--------------------------|-------------------|
| 156. LOCATION CODE | 157. FACILITY ID. NO. | 158. U.T.M. (E) | 159. U.T.M. (N) | 160. SIC NUMBER | 161. DATE APPL. RECEIVED | 162. DATE APPL. REVIEWED | 163. REVIEWED BY: |
|                    |                       |                 |                 |                 |                          |                          |                   |

|                     |                      |                            |          |
|---------------------|----------------------|----------------------------|----------|
| PERMIT TO CONSTRUCT |                      |                            |          |
| 164. DATE ISSUED    | 165. EXPIRATION DATE | 166. SIGNATURE OF APPROVAL | 167. FEE |
| / /                 | / /                  |                            |          |

|                        |                      |                            |          |
|------------------------|----------------------|----------------------------|----------|
| CERTIFICATE TO OPERATE |                      |                            |          |
| 169. DATE ISSUED       | 170. EXPIRATION DATE | 171. SIGNATURE OF APPROVAL | 172. FEE |
| / /                    | / /                  |                            |          |

173.

1.  INSPECTED BY \_\_\_\_\_ DATE \_\_\_\_\_

2.  INSPECTION DISCLOSED DIFFERENCES AS BUILT VS. PERMIT, CHANGES INDICATED ON FORM

3.  ISSUE CERTIFICATE TO OPERATE FOR SOURCE AS BUILT

4.  APPLICATION FOR C.O. DENIED \_\_\_\_\_ DATE \_\_\_\_\_ INITIALED \_\_\_\_\_

|                         |    |
|-------------------------|----|
| 174. SPECIAL CONDITIONS |    |
| 1.                      | 2. |
| 3.                      | 4. |
| 5.                      | 6. |
| 7.                      | 8. |

AGENCY USE ONLY

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