

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



ANGUS S. KING, JR.
GOVERNOR

MARTHA KIRKPATRICK
COMMISSIONER

April 20, 2000

Mr. Fred Evans
Department of the Navy
Northern Division
Naval Facilities Engineering Command
10 Industrial Highway, Mailstop 82
Lester, PA 19113-2090

re: March 17, 2000 Responses to Comments on Draft Seep/Sediment Summary Report
and Responses to Comments on Draft Revised OU3 Risk Assessment, Portsmouth Naval
Shipyard, Kittery, Maine

Dear Fred:

The Maine Department of Environmental Protection has reviewed the responses to
comments referenced above. The Department's comments follow.

Responses to Comments on Draft Seep/Sediment Summary Report

1. Comment 2 – Previous Seep Sampling

The MEDEP objected to the Navy's definition of seeps "as locations where water drains
into Seavey Island into the river." We indicated that this definition would include all
surface water discharge.

The Navy responded with, "Some of the water coming out of the seeps contain surface
water that infiltrated the soil during the high tide, and discharges as a seep during low
tide. Therefore no change to the text is proposed."

This is not the point. All groundwater contains infiltrated surface water. Our point was
that the Navy's definition would include surface water that discharges from the surface of
the island. It would also include storm water discharges. Therefore, the Navy's definition
is incorrect. As the MEDEP original comment stated, please substitute "groundwater"
for "water".

2. Comment 10 – 3.2.2 Sediment

Navy response: "The Navy requests MEDEP provide examples where pesticides have
been addressed under the State of Maine's Uncontrolled Hazardous Substance Sites
Law..."

The following sites have been addressed under the State of Maine's Uncontrolled Hazardous Substance Sites law due solely or partially to the presence of pesticides in soil, sediments, surface water and/or groundwater:

- Petersons Farm Store Site, Woodland, Aroostook County, Maine
- Central Chemical Corporation Site, Greene, Androscoggin County, Maine
- L.E. Macnair Building, Houlton, Maine
- Naval Air Station, Brunswick, Maine
- F.H. Vahlsing site, Easton, Maine

Please see attached documents for details of these sites.

3. Comment 17 – Comparison of Sediment/Mussel Data

Original Navy statement: “These results suggest a potentially more ubiquitous source of pesticides in the offshore.”

The MEDEP's comment discussed data from PNSY sites compared to reference locations and stated, “This indicates that DDD and DDT concentrations at the Shipyard are not representative of background, or reference, conditions but are rather more unique to the Shipyard.”

The Navy's followup response was to refer to the response to Comment 10. While the response to Comment 10 is relevant to MEDEP's comment that there may be an unknown source at the PNSY it does not address the MEDEP's concern regarding the Navy's suggestion of “a potentially more ubiquitous source of pesticides in the offshore”. The MEDEP believes that the Navy's data show that the high DDT/DDD concentrations seen at the Shipyard are not due to some offshore source. Does the Navy believe that elevated levels seen at the Shipyard are due to an offshore source?

4. Comment 19, Indications of Potential Origins of Seep/Sediment Chemicals

Navy response: “...the data were not collected to provide a definitive link...”

The MEDEP does not dispute this statement. However, the available data does suggest a link. Therefore, please discuss the limitations of the existing data, i.e. why it shouldn't be relied upon to make a more definitive statement regarding a link between Topeka Pier and the offshore.

Responses to Comments on Draft Revised OU3 Risk Assessment

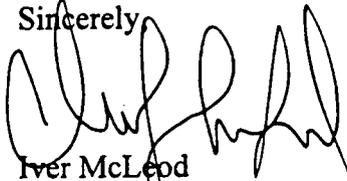
5. Response to Comment 15.2

Navy response: “The Navy requests MEDEP provide examples where pesticides have been addressed under the State of Maine's Uncontrolled Hazardous Substance Sites Law...”

Please see MEDEP Comment 2 above.

Please feel free to contact me at (207) 287-8010 if you have any questions.

Sincerely,



Iver McLeod
Project Manager
Bureau of Remediation and Waste Management

attachments

pc (w/out attachments):

Denise Messier, MEDEP
Larry Dearborn, MEDEP
Katie Zeeman, MEDEP
Harrison Bispham, MEDEP
Meghan Cassidy, USEPA
Marty Raymond, PNS
Linda Klink, TtNUS
Debbie Cohen, TtNUS
Ken Finkelstein, NOAA
Ken Munney, USFWS
Jeff Clifford, RAB
Doug Bogen, RAB

Don Card, RAB
Michele Dionne, RAB
Mary Marshall, RAB
Phil McCarthy, RAB
Jack McKenna, RAB
Onil Roy, RAB
Roger Wells, RAB
Mary Menconi, RAB
Seacoast Anti-Pollution League, TAG Group
Carolyn Lepage, TAG Advisor
Claire McBane, NH F&W
File



Designation file copy
Signed 12/23/91

IN THE MATTER OF

PETERSONS FARM STORE SITE)
Woodland, Aroostook County, Maine)
PROCEEDING UNDER 38 M.R.S.A.)
SECTION 1364 and 1365, UNCONTROLLED)
HAZARDOUS SUBSTANCE SITES)

DESIGNATION OF
UNCONTROLLED HAZARDOUS
SUBSTANCE SITE

Jurisdiction

This designation of an Uncontrolled Hazardous Substance Site is made pursuant to the authority vested in the Commissioner of the Maine Department of Environmental Protection (DEP) under the State of Maine Uncontrolled Hazardous Substance Sites Law, 38 M.R.S.A., Sections 1361-1371.

Findings of Fact

1. The designated "Site" consists of an area adjacent to the Colby Road, in the town of Woodland, in the center of the village of Colby, where soil and groundwater are contaminated with various hazardous substances, primarily pesticides and herbicides. The Site includes a parcel of land owned by Mr. Paul Fuller of Colby, Maine, shown on the Town of Woodland tax map 11, lot 4, and those areas of groundwater and soil affected by contamination originating from the Fuller parcel. The site is depicted in attachment 1A which is attached hereto and made part of this designation.
2. The hazardous substance contamination threat consists of soil and groundwater contaminated with Dinoseb, lead and Dichlorodiphenyldichloroethylene (DDE), and soil contaminated with the following compounds:
Dichlorodiphenyltrichloroethane (DDT), 1,1,dichloro- 2,2-bis (chloro phenyl) ethane (DDD), pentachlorophenol, pyrene, phenanthrene, fluoranthrene, and bis (2 ethyl hexyl) pthalate.
3. The Site was the location of a storage building for Petersons Farm Store (a farm supply store which was located across the street from the Site) which operated from 1924 to 1977. In July, 1990 the current owner of the Site was

having the building torn down, when several leaking, 5 gallon, cans of Dinoseb were found in the building.

4. In September, 1990 under the direction of the Presque Isle - office of the DEP, Clean Harbors of Maine, a clean-up contractor, carried out a "removal action". This removal action included removal of 5 gallon cans of Dinoseb, Dinoseb contaminated soil, a 30 gallon drum of batteries, and a 55 gallon drum of sodium arsenite, under the direction of the Presque Isle office of the DEP.
5. The Site is located in a residential area. Local residents rely on private wells for their domestic water, because there are no public water supplies.
6. In 1990, ten residential wells in the area were sampled by the DEP, and analyzed for herbicides by the State of Maine Department of Human Services (DHS) laboratory. Three of these wells were found to be contaminated with Dinoseb at concentrations ranging from 1.24 parts per billion (ppb) to 57.3 ppb. The maximum exposure guideline, set by the State Toxicologist, for Dinoseb is 2 ppb.
7. Activated carbon filters were installed by the DEP, on these three wells contaminated with Dinoseb.
8. On October 9, 1991 the DEP inspected the Site to obtain information for a Preliminary Assessment (PA) report for the Environmental Protection Agency (EPA). Soil and groundwater samples were taken and analyzed and the following hazardous substances were found:

<u>Compound</u>	<u>Maximum Reported Concentration</u>
<u>Soil</u>	
phenanthrene	1.2 mg/kg
pyrene	1.1 mg/kg
fluoranthrene	1.2 mg/kg
Dinoseb	J36 mg/kg
DDT (o'p' and p'p')	195 mg/kg
DDD (o'p' and p'p')	24.2 mg/kg
DDE	1.2 mg/kg
pentachlorophenol	J8.5 mg/kg
bis (2 ethyl hexyl) pthalate	3.7 mg/kg
<u>Water</u>	
Dinoseb	38 ppb
lead	15 ppb
DDE	0.40 ppb

mg/kg = milligrams per kilogram = parts per million
 J = approximately

9. The contaminants identified in paragraph 8 exhibit the following characteristics and pose a threat to the public health or safety and to the environment:

A. Dinoseb (2,4-dinitro) 6-(1-methyl propyl)-phenol

Dinoseb is a highly toxic substance by oral and dermal exposure. Death with convulsions and vomiting has occurred from ingestion. Long term exposure of some animals to non-fatal doses has caused cataracts and reduced body growth.

Dinoseb is assigned Hazardous Waste #P020 under the DEP's Hazardous Waste Management Rules.

B. Bis (2-ethyl hexyl) pthalate

This is a colorless to pale yellow liquid, either odorless or with a faint, mild odor, combustible, and nearly insoluble in water. This is an irritant to eyes and skin, and ingestion can cause abdominal cramps, nausea and diarrhea.

Bis (2-ethyl hexyl) pthalate is assigned Hazardous Waste #U028 under the DEP's Hazardous Waste Management Rules.

C. Polynuclear Aromatic Hydrocarbons (PAH)

PAH's are extremely insoluble in water. They are rather persistent in the environment, and some are carcinogenic both at the point of application and systemically. These also cause skin disorders and immunosuppression and, in general, have adverse effects on the liver and kidney.

Examples of PAH's found at the Site which are classified as Hazardous Waste under the DEP's Hazardous Waste Management Rules:

1. pyrene - Hazardous Waste #K022
2. phenanthrene - Hazardous Waste #K022
3. fluoranthrene - Hazardous Waste #U120

D. DDT (Dichlorodiphenyltrichloroethane)

DDT is a polychlorinated non-degradeable pesticide. Poisoning may occur by ingestion or by absorption through skin or through the respiratory tract. Solvents such as kerosine increase toxicity. Chronic effects include hepatic damage, central nervous system degeneration, agranulocytosis, dermatitis, weakness, convulsions, coma, and death.

DDT is assigned Hazardous waste #U061 under the DEP's Hazardous Waste Management Rules

E. DDD [1,1,dichloro-2,2-bis (chloro phenyl) ethane]

DDD is a polychlorinated non-degradeable pesticide, almost insoluble in water. It is slightly irritating to skin, and causes lethargy but no convulsions. Chronic symptoms include atrophy of adrenal cortex and liver damage.

DDD is assigned Hazardous Waste #U060 under the DEP's Hazardous Waste Management Rules.

F. DDE (dichlorodiphenyldichloroethylene)

DDE is a degradation product of DDT found as an impurity in DDT residues.

DDE is listed as a hazardous constituent under the DEP's Hazardous Waste Management Rules.

G. Pentachlorophenol

Pentachlorophenol is a polychlorinated non-degradeable pesticide, almost insoluble in water. Ingestion causes increased, then decreased respiration, low blood pressure and increased urine output; fever, motor weakness, collapse with contortions, and death. It may be absorbed through the skin. It is more toxic when in organic solvents. Dust causes sneezing.

Pentachlorophenol is assigned Hazardous Waste #U242 under the DEP's Hazardous Waste Management Rules.

H. Lead

Lead is a bluish-white, silvery-grey metal. Some lead compounds are readily soluble in water. Exposure to lead can cause toxic effects in the brain and central nervous system, and the kidneys. Chronic exposure to lead by ingestion or inhalation can result in permanent brain damage. Exposure to relatively low levels of lead may cause permanent learning disabilities in children. There is evidence that some lead salts are carcinogenic, inducing kidney tumors in mice and rats. There is also evidence that lead may cause reproductive problems.

Lead has been identified as a toxic pollutant under Section 307 (a) of the Federal Water Pollution Act, and is hazardous by characteristic under Maine State Law (at levels greater than 5 ppm in water) and has been assigned hazardous substance #D008 by the EPA.

References for paragraph 11 regarding characteristics:

Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites. Prepared for the EPA by Clement Associates, INC. Arlington Virginia 9-27-85.

Hawley's Condensed Chemical Dictionary. Van Nostrand Reinhold Co. Inc. 1987.

Merk Index. Tenth edition. 1983.

NIOSH/OSHA Pocket Guide to Chemical Hazards. DHHS (NIOSH) publication No. 90-117.

10. As defined in 38 M.R.S.A., Section 1362, Hazardous Substance means:
- A. Any Substance identified by the Board (of Environmental Protection) under section 1319-0;
 - B. Any substance identified by the Board under Section 1319;
 - C. Any substance designated pursuant to the U.S. Comprehensive Environmental Comprehensive and Liability Act of 1980, Public Law 96-510, Sections 101 and 102, Superfund;
 - D. Any toxic pollutant listed under the U.S. Federal Water pollution control Act, Section 307 (a);
 - E. Any hazardous air pollutant listed under the U.S. Clean Air Act, Section 112;
 - F. Any imminently hazardous chemical substance or mixture with respect to which the administrator of the U.S. EPA has taken action pursuant to the U.S. Toxic Substance Control Act, Section 7; and
 - G. Waste oil as defined in Section 1303.
11. The Substances listed in paragraph 8 above have been designated "hazardous wastes ", by the Board of Environmental Protection, pursuant to 38 M.R.S.A. Section 1319-0, or as hazardous substances under the U.S. Comprehensive Environmental Response Compensation and Liability Act (CERCLA), or as toxic pollutants pursuant to the U.S. Federal Water pollution Control Act, Section 307 (a). They are accordingly, hazardous substances within the meaning of 38 M.R.S.A. Section 1362.
12. The substances listed in paragraph 8 above have been stored, spilled or disposed of in such a manner that they have been,

or are being released or discharged into the soil, groundwater and or surface water of the State.

13. Title 38 M.R.S.A., Section 1362 defines an uncontrolled -- hazardous substance Site as meaning "an area or location, whether or not licensed, at which hazardous substances are or were handled or otherwise came to be located, if it is concluded by the Commissioner [of the DEP] that the Site poses a threat or hazard to the health, safety or welfare of any person or to the natural environment, and that action under this chapter is necessary to abate, clean up or mitigate that threat or hazard. The term includes all contiguous land under the same ownership or control and includes without limitation all structures, appurtenances, improvements, equipment, machinery, containers, tanks and conveyances on the site."
14. Title 38 M.R.S.A. Section 1362 (2) defines "responsible party" as one or more of the following:
 - A. The owner or operator of the uncontrolled site;
 - B. Any person who owned or operated the uncontrolled site from the time any hazardous waste arrived there;
 - C. Any person who arranged for the transport or handling of a hazardous substance, provided that the hazardous substance arrived at the uncontrolled site; and
 - D. Any person who accepted a hazardous substance for transport provided that the substance arrived at the uncontrolled site.

CONCLUSIONS

1. Hazardous substances as defined in 38 M.R.S.A. Section 1362 (1) have been handled and stored at the Petersons Farm Store Site. These substances have entered the soil and groundwater below and adjacent to the Petersons Farm Store Site, in the village of Colby in Woodland, Maine.
2. The presence of these hazardous substances in the groundwater and in the soil has endangered and continues to endanger the public health and the environment.
3. Mr. Paul Fuller as the owner of the Site, is a responsible party as defined in 38 M.R.S.A. 1362 (2).
4. Woodland has no public water system; its residents rely entirely on private groundwater wells. Two drinking water wells are known to be contaminated at levels above safe drinking water guidelines.

5. Remedial action is necessary to abate the threat, danger or hazard to the public health and safety and to the environment posed by the site.

7. Therefore, pursuant to 38 M.R.S.A., Section 1365, the Commissioner hereby Designates the area described in paragraph 1, and further described on Attachment 1, as an Uncontrolled Hazardous Substance Site.

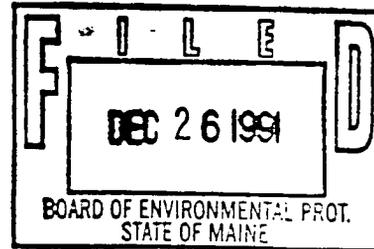
Dean C. Marriott

Dean C. Marriott, Commissioner,
Maine Department of Environmental Protection

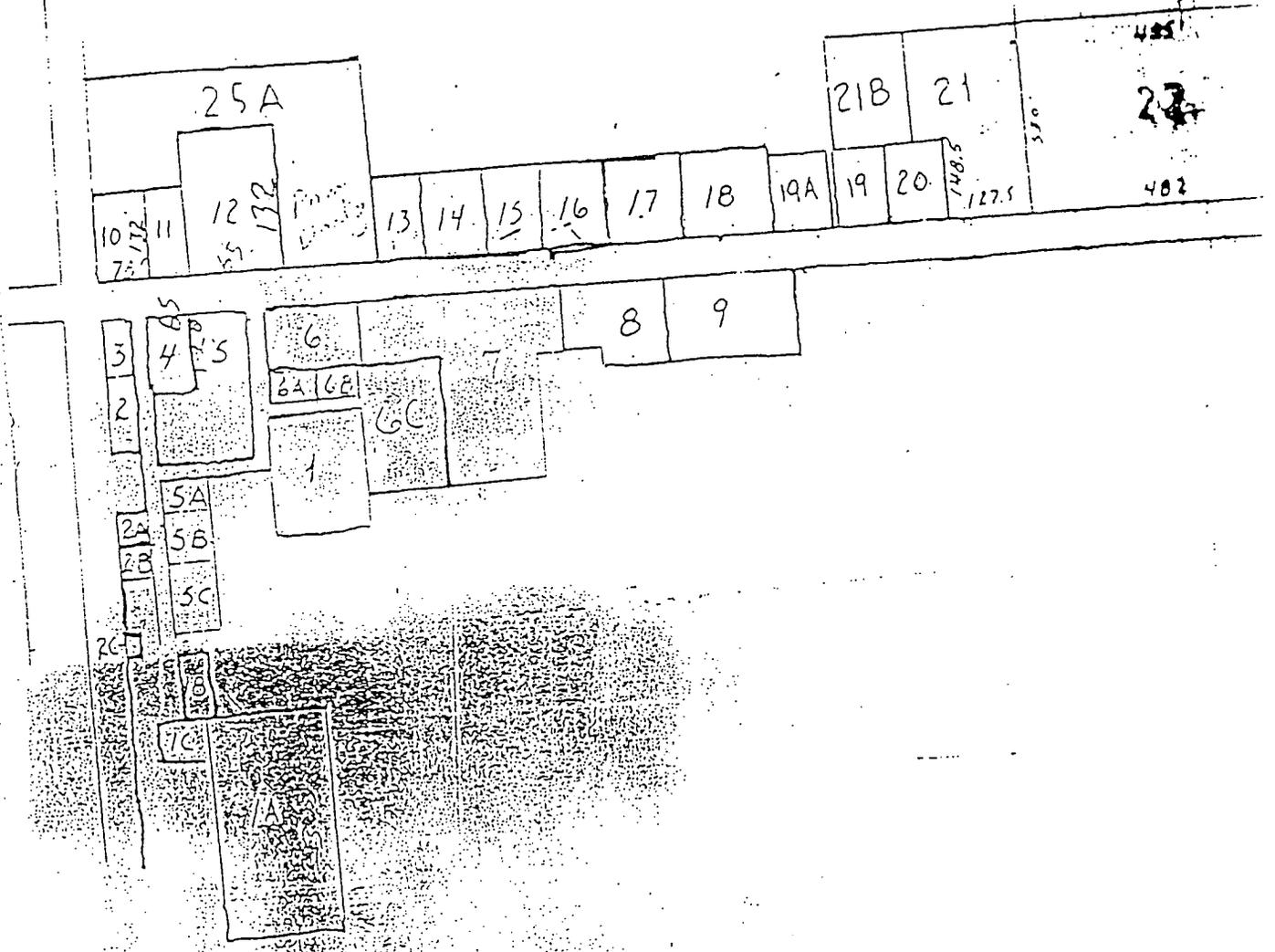
12/23/91

Date

Date filed with the Board of Environmental Protection:



AR00570



TOWN OF WOODLAND
TAX MAP 11



*Designation file copy
Signed 5/2/91*

FILE COPY

IN THE MATTER OF

CENTRAL CHEMICAL CORPORATION SITE)	DESIGNATION OF AN
Greene, Androscoggin County, Maine)	UNCONTROLLED HAZARDOUS
PROCEEDING UNDER 38 M.R.S.A.)	SUBSTANCE SITE
SECTION 1364 and 1365, UNCONTROLLED)	
HAZARDOUS SUBSTANCE SITES)	

Jurisdiction

This Designation of an Uncontrolled Hazardous Substance Site is made pursuant to the authority vested in the Commissioner of the State of Maine Department of Environmental Protection ("Commissioner") under the State of Maine Uncontrolled Hazardous Substance Site Law, 38 M.R.S.A. Sections 1361-1371.

Findings of Fact

1. The Central Chemical corporation Site, hereinafter referred to as the "Site", consists of a lot located on the south side of the Leeds' Junction Road where waste agricultural chemicals were buried (Attachment 1). The property is identified as Lot 41 on the Town of Greene Tax Map # 14 (Attachment 2).
2. Waste agricultural chemicals including hazardous substances were disposed of in an unlined pit located in the northeastern portion of the Site. These chemicals have contaminated the soil and groundwater in the immediate vicinity of the disposal pit (Attachment 2).
3. There are 36 homes located within a one mile radius of the Site all of which rely on private groundwater wells as their sole source of drinking water.

4. The Central Chemical Corporation, owner of the Site since the late 1950's, operated an agricultural chemical storage and distribution facility on the Site from the late 1950s to the early 1980s. During normal operations, packages of chemicals would be damaged, would exceed their expiration date, or would otherwise be deemed unsalable and would require disposal. In 1975 Central Chemical Corporation received approval from the Maine Department of Agriculture for the disposal of the accumulated wastes in a pit located on Site. According to Central Chemical, the wastes included approximately 10,300 pounds of solid chemicals and approximately 34 gallons of liquid chemicals. The wastes were buried in a pit excavated on Site with the approximate dimensions of 12 x 6 feet by 10 feet deep. The chemicals were covered with lime and topsoil to grade.
5. Central Chemical has stated that, at the time of the disposal, the University of Maine Agricultural Station Highmoor Farm contributed waste agricultural chemicals to the amount buried by Central Chemical.
5. According to documents supplied by Central Chemical, the chemicals included application strength insecticides, herbicides, fungicides, acaricides, as well as other chemicals used in the application of the pesticides. Approximately 85% of the buried chemicals consisted of the insecticide Malathion. A list of the solid and liquid chemicals disposed of in the pit can be found in Attachment 3.
6. Hazardous substances reportedly buried on Site in the pit in 1975 include; Phorate, Parathion, Chlordane, maleic hydrazide, Thiram, Silvex (2,4,5 TP), Dasanit, pentachloronitrobenzene, azinphos-methyl and Monocrotophos. Their characteristics are as follows:

A. Phorate:

Phorate is an odorless white solid used as a broad spectrum insecticide/acaricide for residential and commercial purposes.

Phorate is irritating to the respiratory system and affects the central nervous system by inhibiting the formation of cholinesterase. Phorate can be absorbed by inhalation, dermal exposure and ingestion. It degrades to harmless compounds quickly in the soil and has a low bioaccumulation potential.

The recommended State of Maine Maximum Exposure Guideline (MEG) for Phorate in drinking water is 0.2 parts per billion (ppb).

Phorate is listed by the Maine DEP in hazardous waste category P094.

B. Parathion:

Parathion is a brown crystalline solid with a strong garlic like odor used as a broad spectrum insecticide for residential and commercial purposes.

Parathion is irritating to the respiratory system and is a depressant to the central nervous system, cardiovascular system and inhibits the formation of cholinesterase. Phorate can be absorbed by inhalation, dermal exposure and ingestion. It degrades to harmless compounds quickly in the soil and has a low bioaccumulation potential.

The recommended State of Maine Maximum Exposure Guideline (MEG) for Parathion in drinking water is 8.6 ppb.

Parathion is listed by the Maine DEP in hazardous waste category P089.

C. Chlordane:

Chlordane is a brown crystalline solid with a chlorine odor used as a broad spectrum insecticide for residential and commercial purposes.

Chlordane is irritating to the eyes, respiratory system and the central nervous system. It is tentatively identified as a carcinogen. Chlordane can be absorbed by inhalation, dermal exposure and ingestion. It is very persistent in the soil and has a moderate bioaccumulation potential.

The recommended State of Maine Maximum Exposure Guideline (MEG) for Chlordane in drinking water is 0.27 ppb.

Chlordane is listed by the Maine DEP in hazardous waste category U094.

D. Silvex (2,4,5 TP):

Silvex is a colorless solid used as a broad spectrum herbicide for residential and commercial purposes. Sales of this chemical were discontinued in 1984.

Silvex is very similar in formula and structure to 2,4,5 T, a major constituent of Agent Orange, and like 2,4,5 T was reportedly often contaminated with 2,3,7,8 tetrachlorodibenzo-p-dioxin (TCDD). Very little is known about the toxicity of Silvex because most of the toxic properties are attributed to the TCDD contamination. TCDD has been shown to disturb chromosomal activity causing impaired fetal development and fetal loss. Silvex can be

absorbed by inhalation, dermal exposure and ingestion. Silvex has not been shown to be persistent in the soil and has a low bioaccumulation potential. However, TCDD and other potential contaminants have been shown to be more persistent in the soils.

The recommended State of Maine Maximum Exposure Guideline (MEG) for Silvex in drinking water is 1 ppb.

Silvex is listed by the Maine DEP in hazardous waste category U233.

E. Dasanit (Fensulfothion):

Dasanit is a colorless, odorless oil used as a broad spectrum insecticide for residential and commercial purposes.

Dasanit is irritating to the respiratory system, the cardiovascular system and the central nervous system and inhibits the formation of cholinesterase. Dasanit can be absorbed by inhalation, dermal exposure and ingestion. It degrades to harmless compounds quickly in the soil and has a low bioaccumulation potential.

No Maximum Exposure Guideline (MEG) for Dasanit has been determined.

Dasanit is listed by the Maine DEP in hazardous waste category P156.

F. Pentachloronitrobenzene (PCNB):

PCNB is a pale yellow crystalline solid with a mild chlorine odor used as a commercial and residential fungicide.

PCNB is irritating to the eyes, respiratory system, mucous membranes and skin. Though not very acutely poisonous, it is a suspected carcinogen. PCNB can be absorbed by inhalation, dermal exposure and ingestion. It is persistent in the soil but has not been shown to bioaccumulate.

The recommended State of Maine Maximum Exposure Guideline (MEG) for PCNB in drinking water is 71 ppb.

PCNB is listed by the Maine DEP in hazardous waste category U185.

G. Azinphos-methyl (Guthion):

Guthion is a brown waxy solid used as a broad spectrum insecticide for residential and commercial purposes.

Guthion is irritating to the eyes, respiratory system, the cardiovascular system and the central nervous system and inhibits the formation of cholinesterase. It is a suspected liver carcinogen and mutagen. Guthion can be absorbed by inhalation, dermal exposure and ingestion. It degrades to harmless compounds quickly in the soil and has a low bioaccumulation potential.

The recommended State of Maine Maximum Exposure Guideline (MEG) for Guthion in drinking water is 25 ppb.

Guthion is listed by the Maine DEP in hazardous waste category P151.

H. Monocrotophos:

Monocrotophos is a reddish brown solid used as a broad spectrum insecticide for residential and commercial purposes.

Monocrotophos is irritating to the respiratory system, the cardiovascular system and the central nervous system and inhibits the formation of cholinesterase. It is also a suspected mutagen. Monocrotophos can be absorbed by inhalation, dermal exposure and ingestion. It degrades to harmless compounds quickly in the soil and has a low bioaccumulation potential.

No Maximum Exposure Guideline (MEG) for Monocrotophos has been determined.

Monocrotophos is listed by the Maine DEP in hazardous waste category P147.

I. Maleic hydrazide:

Maleic hydrazide is a white powder used as a commercial growth retardant and shipping aid.

Maleic Hydrazide though not acutely poisonous can cause chronic liver damage and is a suspected liver and kidney carcinogen and mutagen. Maleic Hydrazide is not readily absorbed through the skin but can be absorbed through ingestion and inhalation.

The recommended State of Maine Maximum Exposure Guideline (MEG) for Maleic Hydrazide in drinking water is 3500 ppb.

Maleic Hydrazide is listed by the Maine DEP in hazardous waste category U148.

J. Thiram:

Thiram is a colorless odorless solid used as a fungicide for residential and commercial purposes.

Thiram is irritating to the skin, respiratory system, the cardiovascular system and the central nervous system and is a suspected mutagen. It can cause dermatitis upon skin contact but is most toxic through inhalation and ingestion. It degrades to harmless compounds quickly in the soil and has a low bioaccumulation potential.

The recommended State of Maine Maximum Exposure Guideline (MEG) for Thiram in drinking water is 10 ppb.

Thiram is listed by the Maine DEP in hazardous waste category U244.

The following compounds were not reportedly disposed of in 1975, but have been documented in the ground water in the immediate vicinity of the disposal pit.

K. Endosulfan:

Endosulfan is a white powder with a mild chlorine odor used as an broad spectrum insecticide for residential and commercial purposes.

Endosulfan is a nervous system stimulant and can be readily absorbed through inhalation, ingestion or dermal contact. It is also a suspected carcinogen. Endosulfan is persistent in the soil and has a moderate bioaccumulation potential.

No MEG has been determined for Endosulfan.

Endosulfan is listed by the Maine DEP in hazardous waste category P050.

L. Pentachlorophenol:

Pentachlorophenol is a buff colored crystalline solid with a mild chlorine odor used as a commercial wood preservative and commercial pesticide.

Pentachlorophenol is a metabolic stimulant and is irritating to the skin and mucous membranes. It can be absorbed by dermal contact, inhalation and ingestion. Pentachlorophenol is moderately persistent in the soil and has a low bioaccumulation potential.

The recommended State of Maine Maximum Exposure Guideline (MEG) for pentachlorophenol in drinking water is 6 ppb.

Pentachlorophenol is listed by the Maine DEP in hazardous waste category F021.

Chemical, Physical and Biological Properties of Compounds Present at Hazardous Waste Sites, Prepared for EPA by Clement Associates, Arlington, VA, 9/27/85.

Farm Chemical Handbook, Meister Publishing Company, 1990.

NIOSH Pocket Guide to Chemical Hazards, USDH&HS, 9/85.

Merck Index, Tenth Edition, 1983.

Pesticide Users' Health and Safety Handbook, Andrew Watterson, 1988.

Revised Maximum Exposure Guidelines, Maine Department of Human Services, Revised 5/30/90.

7. In 1987, Central Chemical Corporation hired Robert G. Gerber, Inc. a Freeport, Maine environmental consulting firm, to perform an investigation into the geology in the area around the disposal pit and determine if any contamination was migrating from the pit through the soil or groundwater. Groundwater samples gathered from monitoring wells installed during the investigation indicated low level contamination by pesticide compounds in the monitoring wells down gradient from the disposal area (Attachment 4). Due to the disposal method, soil contamination is suspected but has not been confirmed through direct analysis.
8. Samples of the surface water gathered from two small streams on Site did not reveal any contamination by the chlorinated pesticides.
9. As defined in 38 M.R.S.A. Section 1362(1) Hazardous Substance means:
 - A. Any substance identified by the Board under section 1319-0;
 - B. Any substance identified by the Board under section 1319;
 - C. Any substance designated pursuant to the United States Comprehensive Environmental Response, Compensation and Liability act of 1980, Public Law 95-510, Sections 101 and 102 (Superfund);
 - D. Any toxic pollutant listed under the United States Federal Water Pollution Control Act, Section 307(a);
 - E. Any hazardous air pollutant listed under the United States Clean Air Act, section 112;

- F. Any imminently hazardous chemical substance or mixture with respect to which the Administrator of the United States Environmental Protection Agency has taken action pursuant to the United States Toxic Substances Control Act, Section 7; and
- G. Waste oil as defined in Section 1303.
10. The substances listed in paragraph 6, sub-paragraphs A-L except K, have been designated as hazardous wastes by the Board of Environmental Protection pursuant to 38 M.R.S.A. Section 1319-O, and/or as hazardous substances pursuant to the United States Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and/or as toxic pollutants pursuant to the United States Federal Water Pollution Act, section 307(a). These substances which are of the concentrations listed in Attachment 4, and which have been disposed of at the Site in such a manner that they have been or are being released or discharged into the soil, groundwater, or surface water are, accordingly, hazardous substances within the meaning of 38 M.R.S.A. Section 1362.
11. Title 38 M.R.S.A., Section 1362 defines an uncontrolled hazardous substance Site as meaning "an area or location, whether or not licensed, at which hazardous substances are or were handled or otherwise came to be located, if it is concluded by the Commissioner (of the DEP) that the Site poses a threat or hazard to the health, safety or welfare of any person or to the natural environment, and that action under this chapter is necessary to abate, clean up or mitigate the threat or hazard. The term includes without limitation all structures, appurtenances, improvements, equipment, machinery, containers, tanks, on the Site."
12. 38 M.R.S.A. Section 1362(2) defines "responsible party" as one or more of the following:
- A. The owner or operator of the uncontrolled Site;
 - B. Any person who owned or operated the uncontrolled Site from the time any hazardous substance arrived there;
 - C. Any person who arranged for the transport and handling of a hazardous substance, provided that the substance arrived at the uncontrolled Site; and
 - D. Any person who accepted a hazardous substance for transport, provided that the substance arrived at the uncontrolled Site.

Conclusions

Based on the above Findings of fact, the Commissioner concludes the following:

1. Hazardous substances as defined in 38 M.R.S.A. Section 1362(1) have been disposed of at the Central Chemical Corporation Site.
2. Hazardous substances which were handled, disposed of and are existing at the Central Chemical Corporation Site create a danger to the public health and safety of any person and to the environment.
3. Continued danger to the public health and safety of any person or to the environment exists as a result of the continued presence of hazardous substances at the Site. The Site also poses a threat to the soil and groundwater of the immediate area and the nearby Dead River.
4. The actual or threatened releases of hazardous substances from the Site pose a threat to the public health, safety or welfare and to the natural environment.
5. Central Chemical Corporation is a responsible party as defined in 38 M.R.S.A. Section 1362(2).
6. The University of Maine due to alleged waste contribution to the disposal pit from Highmoor Farm is considered potentially a responsible party as defined in 38 M.R.S.A. Section 1362(2).
7. Remedial action is necessary to abate the threat, danger, or hazard to the public health and safety and to the environment posed by the Site.
8. The Designation does not constitute a clean up order and therefore is not ripe for review until and unless a cleanup order is issued under 38 M.R.S.A 1365 (1)(2) and (4).
9. THEREFORE, pursuant to 38 M.R.S.A. Section 1365, the Commissioner DESIGNATES the Central Chemical Corporation Site in Greene, Androscoggin County, Maine an Uncontrolled Hazardous Substance Site.

DONE AND DATED AT AUGUSTA, MAINE THIS 2ND DAY OF May, 1991.

COMMISSIONER OF ENVIRONMENTAL PROTECTION

BY:

Dean C. Marriott
Dean C. Marriott, Commissioner

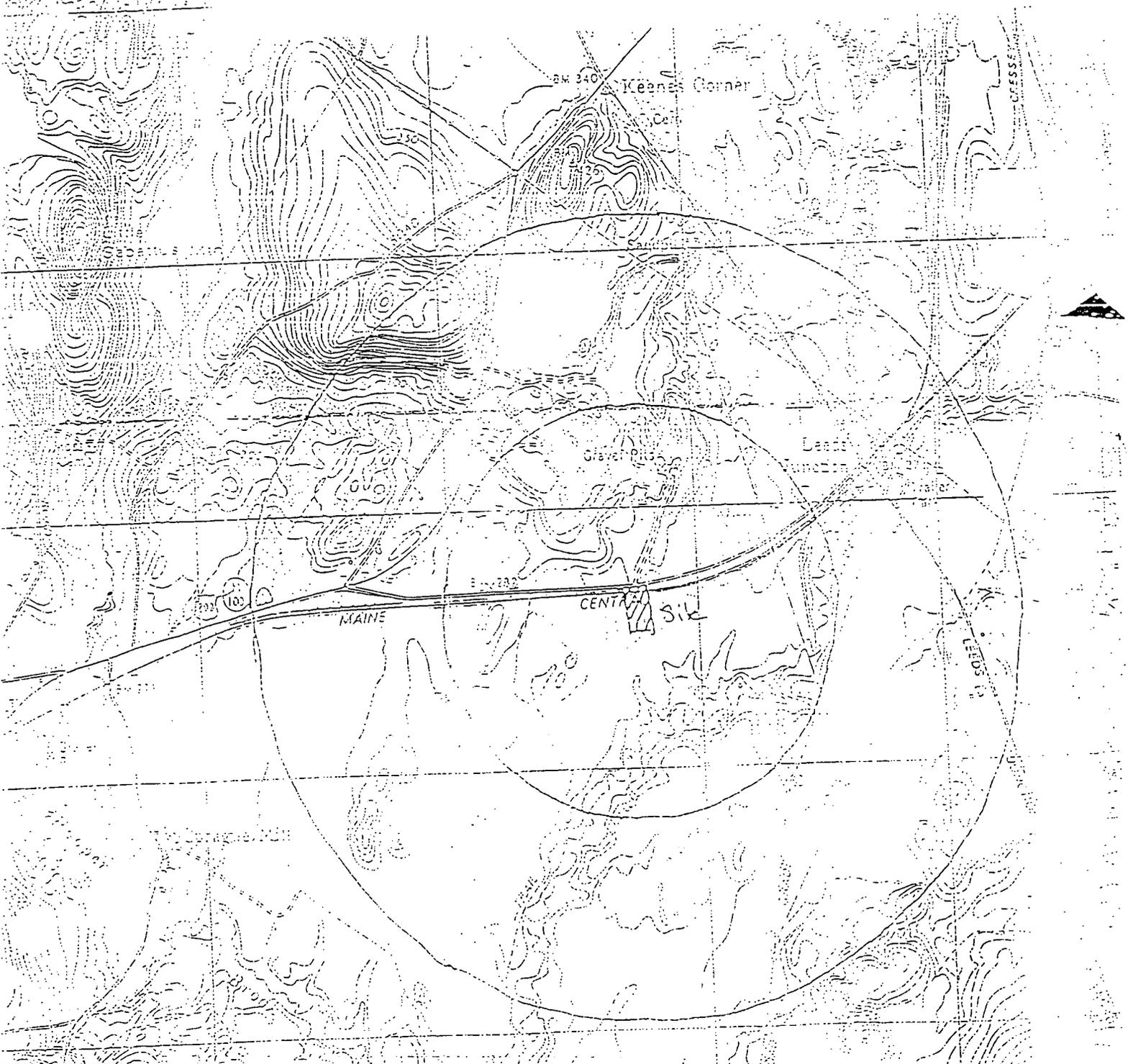
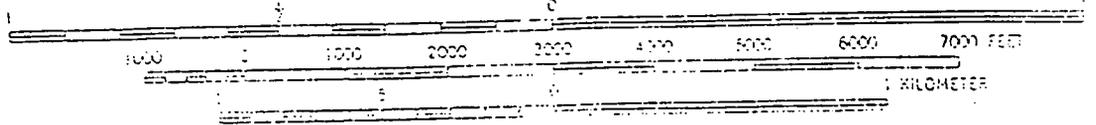
ATTACHMENTS

1. Site Location Map
2. Town of Greene Tax Map
3. Materials Buried in the Central Chemical Corporation Disposal Pit
4. Summary of Groundwater Analysis

ATTACHMENT 1
M. P. SITE AREA MAP
CENTRAL CHEMICAL CORPORATION SITE
GREENE, MAINE

USGS 7.5 Minute Topographic Map, Monmouth Quadrangle

SCALE 1:24000



ATTACHMENT 3

MATERIALS BURIED IN THE CENTRAL CHEMICAL CORPORATION DISPOSAL PIT

ME DEP 1991

SOLID COMPOUNDS (reported in pounds)

Quantity	Trade Name	Synonyms	Merck name and no.	Water sol.	EPA ID	Toxicity
300	Epsom Salts	none	Magnesium Sulfate 5513	yes	none	nontoxic
112	Malathion 25W	none	Malathion 5522	yes	none	LD50(rat) = 1375mg/kg
7900	Malathion 4D	none	Malathion 5522	yes	none	LD50(rat) = 1375mg/kg
500	Potatoe seed dust	Maneb,	Maneb 5543	yes	none	breaks down to Carbamate
75	Sutan Atras WP	Butylate	Butylate 1519	yes	none	LD50(rat) = 3500mg/kg
150	Sutan Atras 18-6	same	Butylate 1519	yes	none	LD50(rat) = 3500mg/kg
200	Solubor	Borax	Borax 8421	yes	none	LD50(rat) = 5000mg/kg
50	Thimet	Phorate	Phorate 7216	no	P094	LD50(rat) = 1.1mg/kg
50	Dithane Z78	Zineb	Zineb 9973	no	none	LD50(rat) = > 2500mg/kg
300	Rosul Dust	Rotenone	Rotenone 8138	no	none	LD50(rat) = 3mg/kg
450	Chlor Kill 10 Dust	Chlordane, Toxiclor	Chlordane 2046	no	U036	LD50(rat) = 343mg/kg
75	Vegiben G	Chloramben, Amiben	Chloramben 2030	yes	none	LD50(rat) = 1700mg/kg
90	Sulpher Mag 95	Epsom Salts?				
3	Terrachlor	Quintozene, PCNB	Quintozene 8003	no	U185	LD50(rat) = 1700mg/kg
1.25	Fruitone N	Napthalanacetic Acid	Napthalanacetic Acid 6221	no	none	LD50(rat) = 1000mg/kg
50	Phoskill	Parathion	Parathion 6897	no	P089	LD50(rat) = 5mg/kg
10306.25	Total Solids					

ATTACHMENT 3 con't

MATERIALS BURIED IN THE CENTRAL CHEMICAL CORPORATION DISPOSAL PIT

ME DEP 1991

LIQUID COMPOUNDS(reported in gallons)

Quantity	Trade Name	Synonyms	Merck name and no.	Water sol.	EPA ID	Toxicity
5	Guthion 25	Azinphosmethyl	Azinphosmethyl 914	yes	P151	LD50(rat) = 11mg/kg
2	Lo Drift Viscosity Adjuvent		?	?	?	?
5	Thuricide HPG	Bacillus Thuringiensis		no	none	NA
5	Azodrin 3.2	Monocrotophos	Monocrotophos 6105	yes	P147	LD50(rat) = 17mg/kg
2	Fruitone T	Silvex,2,4,5-TD	Sivex 8371	yes	U233	LD50(rat) = 650mg/kg
2	Dasanit	Fensulfothion	Fensulfothion 3925	yes	P156	LD50(rat) = 5mg/kg
1	Floratone	Gibberellic Acid	Gibberellic Acid 4276	yes	none	
4	Kelthane EC	Dicofol	Dicofol 3070	no	none	LD50(rat) = 1495mg/kg
1	Miller's 531		Cd,Ca,Cu,Zn,Cr complex			
6	Maleic Hydrazide	MH	Maleic Hydrazide 5527	yes	U148	LD50(rat) = 6950mg/kg
1	Arasan 42s	Thiram	Thiram 9216	no	U244	LD509rat) = 640mg/kg
34	Total Liquids					

ATTACHMENT 4
CENTRAL CHEMICAL CORPORATION
ANALYTICAL RESULTS
ME DEP 1991

MONITORING WELLS

DATE	1/20/88 E.C. JORDAN LAB	5/9/88	5/9/88 PHL
B 101			
Endosulfan Sulfate	ND	ND	ND
Endosulfan I	ND	ND	ND
Endosulfan II	ND	ND	ND
Malathion	NS	ND	*
Methyl Parathion	NS	ND	ND
Ethylene Thiourea	NS	ND	ND
Pentachlorophenol	NS	ND	TRACE
B 102			
Endosulfan Sulfate	NS	0.11	0.87#
Endosulfan I	NS	0.16	#
Endosulfan II	NS	0.21	#
Malathion	NS	ND	*
Methyl Parathion	NS	ND	ND
Ethylene Thiourea	NS	ND	ND
Pentachlorophenol	NS	ND	1.2
B 103			
Endosulfan Sulfate	0.6	0.27	0.36#
Endosulfan I	0.19	0.06	#
Endosulfan II	ND	ND	#
Malathion	NS	ND	*
Methyl Parathion	NS	ND	ND
Ethylene Thiourea	NS	ND	ND
Pentachlorophenol	NS	ND	0.2
B 104			
Endosulfan Sulfate	ND	ND	ND
Endosulfan I	ND	ND	ND
Endosulfan II	ND	ND	ND
Malathion	NS	ND	*
Methyl Parathion	NS	ND	ND
Ethylene Thiourea	NS	ND	ND
Pentachlorophenol	NS	ND	1.08

In parts per billion (ug/L)

ND None Detected

NS Not Sampled

PHL Department of Human Services Public Health Laboratory

* Possibly detected below detection limits

Unspecified Endosulfan type, see Endosulfan Sulfate

ADMINISTRATIVE ORDER
IN THE MATTER OF

L.E. MACNAIR BUILDING
15 Franklin Street
Houlton, Maine 04730

PROCEEDING UNDER SECTION 1304(12) OF
HAZARDOUS WASTE, SEPTAGE AND SOLID
WASTE MANAGEMENT ACT, 38 MRSA
SECTIONS 1301-1310-B, AND THE
UNCONTROLLED HAZARDOUS SUBSTANCE
SITE LAW, 38 MRSA SECTIONS 1364 & 1365

ADMINISTRATIVE ORDER BY CONSENT

MAINE DEPARTMENT OF
ENVIRONMENTAL PROTECTION

TABLE OF CONTENTS

	Page --
I. PARTIES.....	1
II. DEFINITIONS.....	1
III. JURISDICTION.....	3
IV. STATEMENT OF PURPOSE.....	3
V. FINDINGS OF FACT.....	4
VI. DETERMINATIONS OF COMMISSIONER.....	10
VII. ORDER AND AGREEMENT OF STATE AS TO FURTHER WORK.....	10
VIII. REIMBURSEMENT FOR STATE'S RESPONSE COSTS.....	12
IX. RELEASE FROM LIABILITY; RESERVATION OF RIGHTS.....	13
X. ADDITIONAL AGREEMENTS BY THE PARTIES.....	15
50. Assumption of Risk.....	15
51. Payments or Expenditures.....	15
52. Sampling.....	16
53. Field and Laboratory Procedures.....	16
54. Data Disclosure.....	16
55. Access.....	16
56. Document Preservation.....	17
57. Other Claims.....	17
58. Other Laws.....	17
59. Collection of Past Due Response Costs.....	17
60. Hold Harmless Agreement.....	18
61. Contribution Protection.....	18
62. Notice.....	19
63. Subsequent Modification.....	19
64. Incorporation.....	20

EXHIBITS

EXHIBIT A	Site Characterization Scope of Work
EXHIBIT B	Form of Deed transferring ownership from MacNair Creditor Trust to MPG
EXHIBIT C	Form of Deed transferring ownership from Bangor Investment Co. to MPG
EXHIBIT D	Sytsema letter dated 5/11/95
EXHIBIT E	Operation & Maintenance (L.E. MacNair Bldg.)
EXHIBIT F	Allocation For MacNair Response Action
EXHIBIT G	Declaration of Restrictive Covenant

PARTIES

1. Parties to this Administrative Order by Consent are:
 - A. Bangor and Aroostook Railroad Company and its affiliated entity, Bangor Investment Company.
 - B. Maine Potato Growers, Inc. ("MPG").
 - C. L.E. MacNair Creditor Trust (David Edgar, Sole Surviving Co-Trustee; beneficiaries of the Creditor Trust: Bemis Company; Stanford Holdings, Limited as successor to Stanford Seed Co.; and TCC Acquisition Corp., as successor to AFCO Credit Corporation).
 - D. The Maine Department of Environmental Protection ("DEP" or "Department"), an agency of the State of Maine. Under the authority of 38 M.R.S.A. §341-A, the Department is charged with the responsibility of administering and enforcing the State's environmental laws and regulations. For the purpose of this Administrative Order by Consent, the Department of Environmental Protection shall include any successor department or agency of the State.

II. DEFINITIONS

2. The following definitions shall apply in this Administrative Order by Consent:
 - A. "Commissioner" means Commissioner of the Department of Environmental Protection.
 - B. "Consent Order" means this Administrative Order by Consent, including, but not limited to, all figures and appendices attached hereto and all reports, plans, specifications, schedules or other documents submitted and approved, or modified, pursuant to this Consent Order.
 - C. "Days" means calendar days unless otherwise specified.

- D. "Hazardous Substance" means any material identified as a hazardous substance pursuant to 38 M.R.S.A. §1362(1).
- E. "Interest" means the rate of interest of 1.5% per month or 18% per year.
- F. "Parties" mean Bangor and Aroostook Railroad Company, and its affiliated entity, Bangor Investment Company, Maine Potato Growers, Inc. ("MPG"), L.E. MacNair Creditor Trust (David Edgar as Sole Surviving Co-Trustee; member beneficiaries: Bemis Company, Stanford Holdings, Limited, as successor to ~~S~~anford Seed Co., and TCC Acquisition Corp., as successor to AFCO Credit Corporation), and DEP.
- G. "Respondents" mean Bangor and Aroostook Railroad Company and its affiliated entity, Bangor Investment Company, Maine Potato Growers, Inc., and L.E. MacNair-Creditor Trust (David Edgar as Sole Surviving Co-Trustee; member beneficiaries: Bemis Company, Stanford Holdings, Limited as successor to Stanford Seed Co., and TCC Acquisition Corp., as successor to AFCO Credit Corporation).
- H. "Response Costs" shall mean all of the State's costs which are recoverable under 38 M.R.S.A. §1367, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, and interest incurred with respect to the Site and costs related to this Consent Order including, but not limited to, the costs of reviewing or commenting on plans, reports or other items pursuant to this Consent Order, conducting and/or verifying the remedial action, or otherwise implementing or enforcing this Consent Order.
- I. "Site" shall mean an approximately four acre parcel of land located at 15 Franklin Street in Houlton, Maine, including a 38,590 square foot building and two lots, which are identified as Lots 36 and 37 on Map 28 of the Town of Houlton Property Maps on file in the Town Municipal Office, where Hazardous Substances have come to be located, and

shall include areas contiguous to the facility where hazardous substances generated at the facility have migrated.

III. JURISDICTION

3. This Consent Order is issued pursuant to the authority vested in the Commissioner by the Hazardous Waste, Septage and Solid Waste Management Act, 38 M.R.S.A. §§1301-1310-B and the Uncontrolled Hazardous Substance Sites Law, 38 M.R.S.A. §1361 *et seq.*
4. The Respondents do not contest DEP's jurisdiction to issue this Consent Order and the Respondents do not contest DEP's determination that a factual and legal basis exists to support the issuance of this Consent Order under the authority of 38 M.R.S.A. §1304(12), §1364, and §1365. Notwithstanding the above, and except for purposes of enforcing this Consent Order, the Respondents do not admit any of the Findings of Fact or the Determinations by the Commissioner set forth in Sections V and VI below and reserve their right to contest the Findings of Fact or the Determinations of the Commissioner in any other proceeding, suit or claim.
5. This Consent Order shall apply to and be binding upon the Respondents, their successors and assigns, and consultants or others retained pursuant to this Consent Order.

IV. STATEMENT OF PURPOSE

6. The objectives of this Consent Order are to:
 - A. Complete the characterization of the Site and identify the extent of any contaminant migration as set forth in the Scope of Work attached as Exhibit A.
 - B. Formulate and evaluate alternatives and recommendations for the appropriate extent of remedial action.

- C. Provide a mechanism for implementation of all remedial actions necessary to prevent or mitigate any actual or potential threats to the public health and the environment which may be posed by hazardous substances present in soil and/or ground water on and beneath the Site, and/or surface water and surface water sediments on or adjacent to the Site.
- D. Assure long-term security and maintenance of the site while promoting the safe and productive reuse of the site.
- E. Provide for the payment of a portion of future Response Costs which may be incurred by the DEP.
- F. Resolve any and all liability among the Parties.

V. FINDINGS OF FACT

7. The Site is improved by a building ("the MacNair Building"), a wood frame structure containing 30 separate rooms and 6 cement vaults, consists of a main floor, two partial upper floors, and two partial basements on two levels. The MacNair Building contains approximately 38,590 sq. ft. of floor space.
8. The outflow from an artesian well located beneath the building emerges from a pipe near the northeast corner of the foundation of the MacNair Building and flows approximately 150 feet northeast along a drainage swale which enters the Pearce Brook. Pearce Brook flows through the northeast corner of the Site.
9. The MacNair Building was operated from the late 1930's until the mid 1960's as a potato starch manufacturing facility.
10. From 1966 until at least 1981, the L.E. MacNair Chemical Company (known as the L.E. MacNair Company after 1978) used the MacNair Building to formulate, mix, package and store agricultural pesticides, herbicides, fungicides.
11. In 1978, G. Milton and G.M. Nicholas Carter purchased all corporate shares of the L.E. MacNair Company. G. Milton Carter served as President; and G.M. Nicholas

- Carter served as a Director and Treasurer of the L.E. MacNair Company between 1978 and 1981.
12. The L.E. MacNair Company ceased doing business in 1982.
 13. Starting in 1982, Maine Potato Growers, Inc. leased space in the MacNair Building from the L.E. MacNair Company for a period of 3 to 4 weeks each year to mix, package and store agricultural chemicals. This practice continued through 1988 after the MacNair Creditor Trust acquired the property. Maine Potato Growers, Inc. have stated that this product formulation, mixing, and packaging was limited to Dithane M-45 and talc.
 14. At least eight creditors of the L.E. MacNair Company filed for, and secured executions against the property of the L.E. MacNair Company in 1982 and 1983.
 15. Three of the L.E. MacNair Company creditors, organized as the L.E. MacNair Creditor Trust with David J. Edgar and John O. Rogers (now deceased) as Co-Trustees, acquired the MacNair Building property in a Sheriff's Sale on November 11, 1984, as recorded in documents on file in the Aroostook County (South) Registry of Deeds.
 16. The L.E. MacNair Creditor Trust Beneficiaries are TCC Acquisition Corp. (successor to the AFCO Credit Corporation), the Bemis Company, and Stanford Holdings, Limited.
 17. The L.E. MacNair Creditor Trust is the present owner of the MacNair Building and that portion of the Site property depicted as Lot #36 on the Town of Houlton Property Map #28.
 18. The Bangor and Aroostook Railroad is the former owner of that portion of the Site depicted as Lot #37 on the Town of Houlton Property Map #28. This property was purchased from James F. Holland in 1895, as recorded in documents on file in the Aroostook County South Registry of Deeds. The Bangor and Aroostook's

interest in the site was conveyed to an affiliated entity, the Bangor Investment Company in March 1995.

19. In July 1988, the Maine Department of Environmental Protection (DEP) responded to a complaint by the Houlton Codes Enforcement Officer regarding chemical fumes emanating from the MacNair Building. DEP personnel found open, spilled, and leaking containers of both dry powder and liquid pesticides throughout the building.
20. As a part of the emergency response actions on August 26, 1988, the DEP identified Hazardous Substances present in the MacNair Building by recording the contents of containers as revealed by their labels. In addition the DEP identified Hazardous Substances which had been received at or shipped from the facility prior to August 26, 1988 from receipts and other documents found on the premises. The following Hazardous Substances were identified: DDT dust, copper dust, zeilate dust, diazinon (diastix) dust, ferbam (dimethyldithiocarbamic acid) dust, Lexone (metribuzin), Thimet-10G (phorate), Premerge (dinoseb), Baird's Weed Killer (dinitrophenol), Manzate (maneb), Guthion (azinphos methyl), Bravo 6-F (chlorothalonil), and sodium arsenite. In addition, powders were collected from a mixing hopper and analyzed by the Maine Public Health Laboratory, which reported the presence of DDE, DDT, endrin, and dithiocarbamates.
21. On January 24, 1990, a Roy F. Weston, Inc. Technical Assistance Team, as part of the U.S. Environmental Protection Agency (EPA) Removal Action Site Investigation, collected samples of powders and crystals contaminating various parts of the building. Analysis of these samples revealed the presence of the following Hazardous Substances: arsenic, chromium, nickel, cyclooctasulfur, DDD, DDE, DDT, Dieldrin, 6-dinitro-2-(11-methylpropyl)-4-phenol, and 4-hydroxyl-9H-zanthen-9-one with traces of benzyl butyl phthalate, bis(2-

ethylhexyl) phthalate, fluoranthene, phenanthrene, and pyrene. The Roy F. Weston Technical Assistance Team completed the Removal Program Site Investigation in April, 1990.

22. In November 1990, the U.S. Environmental Protection Agency commenced a removal action at the site. Pesticide containers, pesticide-containing debris and asbestos were removed from individual rooms and consolidated in a staging area for eventual removal. Individual rooms were vacuumed using an industrial vacuum system in an effort to remove pesticide dusts from the building. The EPA-led phase of the Removal Action activities was completed in April 1991.
23. The EPA issued a Unilateral Administrative Order on March 12, 1992 to the following entities: the Bangor and Aroostook Railroad, G.M. Nicholas Carter, the L.E. MacNair Company, David Edgar and John Rogers in their capacity as Trustees of the L.E. MacNair Creditor Trust, and Maine Potato Growers, Inc.
24. The Administrative Order required the above mentioned entities to complete the Removal Action by removing the containerized and overpacked pesticides and pesticide contaminated debris previously staged by the EPA for disposal, sampling of various parts of the building to determine residual contamination, and soil sampling and removal of contaminated soil.
25. The above mentioned entities contracted with Woodard and Curran, Inc., environmental consulting engineers located in Portland, Maine, to complete the Removal Action cleanup activities. Onsite Removal Action activities began on June 1, 1992.
26. Woodard and Curran conducted a field investigation of the Site during the first week of June (June 1-5), 1992 to determine the extent of contamination inside the building and outside the building on the surrounding property. A chain link fence (8 feet high) was installed around the Site property. Sampling was conducted on powder deposits, wooden parts of the building, concrete building floors and drums

containing unidentified material inside the building, and on soils and sediments outside the building. The results of this investigation are presented in "Site Assessment Report (volume 1) for the L.E. MacNair Building Site, Houlton, Maine" dated January, 1993.

27. Soil samples taken from the Site contained the following listed Hazardous Substances:

<u>Substance (Hazardous Waste Number)</u>	<u>Maximum Concentration [milligrams per kilogram (mg/kg)]</u>
Arsenic (P010)	2300
Lead (U144, U145, U146)	1000
Dieldrin (P037)	0.014
DDD (U060)	15
DDE	240
DDT (U061)	880
Endosulfan I (P050)	420
Endosulfan II (P050)	120
Endrin (P051)	410
Methoxychlor (U247)	0.027

28. The final field phase of the Removal Action was completed in August, 1993, and included the removal of pesticide containers and contaminated dust and debris from the building, and contaminated soil in a discrete area near the former loading dock at the Site. Sixty-eight (68) cubic yards of soil were excavated from the loading dock area by Laidlaw Environmental Services and were transported to an offsite hazardous waste facility in Calvert City, Kentucky. Soil excavation for removal was limited to a depth of two feet. The excavated soil was replaced with clean fill.
29. The determination of the location and amount of soil removed was based on a risk assessment evaluation conducted by Woodard & Curran using EPA Removal Action Criteria, which are developed to ameliorate only the most imminent public health threats. Removal Action Criteria are not intended to provide long-term protection of the public health or the environment, but rather to protect the public

health and the environment pending further study. Application of the Removal Action Criteria resulted in cleanup standards for the removal as follows:

<u>Substance</u>	<u>Removal Action Criteria (mg/kg)</u>
Arsenic	1067
Lead	1000
DDE	46
DDT	168
Endosulfan I/II	311
Endrin	933

30. Soil contamination in certain areas onsite remains at levels below the Removal Action Criteria at depths less than two feet, and at levels above the Removal Action Criteria at depths greater than two feet.
31. Potential impacts of onsite contamination on groundwater, surface water, and ecological receptors were identified by DEP.
32. Seventy (70) micrograms per liter ($\mu\text{g}/\text{l}$) of arsenic and 1.3 $\mu\text{g}/\text{l}$ of Endosulfan I were found in groundwater below the Site as determined from laboratory analysis of a sample taken by personnel from the Maine Department of Environmental Protection on July 8, 1993.
33. The Maximum Contamination Level (MCL) for arsenic in drinking water is 50 $\mu\text{g}/\text{l}$, pursuant to the Safe Drinking Water Act, 42 U.S.C. §§ 300f et seq.
34. Sixty-eight (68) mg/kg of arsenic and 68 mg/kg of lead were found in the surface water sediments of the Pearce Brook as determined from laboratory analysis of samples taken by personnel from the Maine Department of Environmental Protection on July 8, 1993.

VI. DETERMINATIONS OF COMMISSIONER

35. Based upon the information contained in the investigations, inspections, sampling and analysis in the Findings of Fact above, the Department has determined pursuant to 38 M.R.S.A. §§1304 (12), 1364 and 1365 that:
- A. Actual discharges of Hazardous Substances into the environment have occurred at the Site in Houlton, Maine;
 - B. Hazardous substances are present in surface and subsurface soils, in ground water, and in surface water sediments at the Site; and there is a reasonable basis to believe that discharges of Hazardous Substances at the Site may be creating a danger to the public and to the environment;
 - C. Under 38 M.R.S.A. §1362, the Respondents (Bangor and Aroostook Railroad Company, and its affiliated entity, Bangor Investment Company, Maine Potato Growers, Inc., and L.E. MacNair Creditor Trust) are responsible parties at the Site.
 - D. Hazardous Substances released at the Site have been discovered in the soils at the site, and may have migrated to the ground water and the surface water sediments at the Site.
 - E. The response measures ordered herein are necessary for the purpose of protecting public health and/or the environment.

VII. ORDER AND AGREEMENT OF STATE AS TO FURTHER WORK

36. The Department and the Respondents agree and the Department hereby orders that the Respondents perform all work necessary to complete the characterization of the Site and identify the extent of contaminant migration ("Site Characterization"). The Scope of Work for said Site Characterization has been reviewed and approved by the Department and is attached hereto as Exhibit A.

37. Within forty-five (45) days after completing the Site Characterization, the Respondents shall submit for Department approval a Draft Site Characterization Report summarizing the activities conducted pursuant to the Scope of Work previously approved by the Department. The Draft Site Characterization Report shall be certified by a Registered Maine Professional Engineer and a certified Maine Geologist to the effect that the Site Characterization has been completed in full satisfaction of the requirements of this Consent Order.
38. The Department will review the Draft Site Characterization Report and provide written comments to the Respondents. The Respondents shall respond to all comments to the satisfaction of the Department, and shall issue a Final Site Characterization Report incorporating appropriate revisions within forty-five (45) days of their receipt of comments.
39. When the Department determines that all work required under the Scope of Work has been fully performed in accordance with this Order, the Department will provide written notice to the Respondents. If the Department determines that the Site Characterization has not been completed in accordance with the provisions of this order, it will so notify the Respondents and provide a list of the tasks remaining to be completed and a schedule for that completion. The Respondents must complete the listed tasks, and complete them in the time limits stated in the schedule, unless the time limits are extended by mutual agreement upon a good faith request by the Respondents.
40. In order to assure long-term security and maintenance of the MacNair Building and the Site, the lots constituting the Site property shall be conveyed by the MacNair Creditor Trust and the Bahgor Investment Company to MPG. Forms of the deeds to convey said interests are attached as Exhibits B and C. The Respondents shall file the deeds in the Aroostook County (South) Registry of Deeds within 30 days of the signature of this order by the Parties. Upon transfer

of the parcels, MPG shall be permitted to use the MacNair Building for the storage of non-edible materials, equipment and supplies. Upon transfer, MPG shall assume all long-term maintenance obligations for the Site in accordance with the terms of the letter dated May 11, 1995 from MPG to the Department attached as Exhibit D and the terms and conditions outlined in Exhibit E.

41. Upon issuance of the Department's written notice that the Site Characterization has been fully performed in accordance with this Order, the obligations of the Respondents hereunder shall terminate except for those set forth in Paragraphs 40 and 43 through 46 hereof.
42. The State of Maine agrees that, upon completion of the Site Characterization, the State shall not require the Respondents to perform or contract for the performance of any further response and/or remedial action(s) at the Site required by the Department, except as described in Paragraph 40, including, but not limited to any necessary risk assessment, remediation of soils (including stream sediment), and any groundwater remediation. The recovery of costs incurred by the State, if any, for such response and/or remedial action(s) shall be as set forth in Paragraphs 43 through 46 hereof.

VIII. REIMBURSEMENT FOR STATE'S RESPONSE COSTS

43. The Respondents shall make certain payments to the State of costs incurred for response and/or remedial action(s) performed by the State or its contractors pursuant to Section VII, Paragraph 42 above (the "State's Response Costs"). Such payment shall be in accordance with the schedule of percentage allocations for response actions performed by the State or its contractors, a copy of which schedule is attached hereto as Exhibit F; the Respondents shall have no responsibility for costs beyond those set forth in Exhibit F.



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17
AUGUSTA, MAINE 04333

Designation file copy
Effective date 8/7/89

IN THE MATTER OF

NAVAL AIR STATION BRUNSWICK SITE)
BRUNSWICK, CUMBERLAND COUNTY, MAINE)
PROCEEDING UNDER 38 M.R.S.A §1365,)
UNCONTROLLED HAZARDOUS SUBSTANCE SITES) DESIGNATION OF
UNCONTROLLED HAZARDOUS
SUBSTANCE SITE

JURISDICTION

This Designation of Uncontrolled Hazardous Substance Site is made pursuant to the authority vested in the Commissioner of Environmental Protection ("Commissioner") under the Uncontrolled Hazardous Substance Sites Law, 38 M.R.S.A. Sections 1361 - 1371.

FINDINGS OF FACT

1. The Naval Air Station Brunswick Site, hereinafter sometimes referred to as the "NASB Site" or the "Site", refers to a parcel of land approximately 3,099 acres in size including the buildings and improvements thereon located in the Town of Brunswick, Cumberland County, Maine. The Site includes the property identified as Lot 0 on Tax Map 40 of the Town of Brunswick's property maps on file in the Brunswick municipal office. The Site is depicted in Attachment 1 which is attached hereto and made a part of this designation.
2. The Site is owned by the United States of America, Department of the Navy ("Navy") and is used by the Navy as an air base for military purposes.

3. Land for NASB was purchased from the Town of Brunswick by the Navy and construction of the base began on October 15, 1942. NASB was commissioned as a base for inshore and offshore Patrol Squadrons on April 15, 1943. The base was demobilized in 1946 and the Site was subsequently used for various nonmilitary activities, including but not limited to: a civilian flying school, automobile servicing, and a shrub nursery. The Site was reactivated by the Navy in December of 1950 and on December 1, 1951 was officially designated as a Naval Air Station.
4. The Site is contained entirely within the boundaries of the Town of Brunswick and is bordered by property zoned by the Town as residential, commercial, industrial, or rural.
5. The Site is located approximately 1/2 mile north of the Jordan Avenue well field, a municipal well field which contributes to the public drinking water supply for the towns of Brunswick and Topsham. It consists of 136 shallow ground water wells of depths varying from 17 to 25 feet. Residences on property adjacent to the southern portion NASB depend on private wells for potable water supply.
6. The Androscoggin River, a Class C body of water, flows within a half mile to the north of NASB. Mere Brook, a Class B body of water, flows across NASB and drains into Harpswell Cove.

7. The Naval Air Station Brunswick serves and maintains aircraft for duty in the North Atlantic and conducts related activities such as weapons maintenance and public works. Aircraft maintenance operations include a paint shop, battery shop, electronic component repair, electronic equipment corrosion repair, tire shop, and life raft repair. These operations produce wastes which include paint, primers, glue, toluene, degreaser, waste acid, contaminated filters, trichloroethane, oils, lubricants, chromic acid, hydrofluoric acid and solvent. Operations of the Public Works Department include an electrical shop, paint shop, metal trade shop, asbestos removal shop, carpentry, boiler house, public works garage and pest control shop. Wastes generated include battery acid, solvent, waste oil, ethylene glycol, absorbent, oil filters, mercury vapor lights, empty cans of insulation spray, paint, brushes, rags, insulation and flyash. NASB has a weapons maintenance section, and in the past practices included more extensive maintenance procedures and generated larger quantities of waste. Currently, out of date ordnance is detonated in an Ordnance Disposal Area. Some of the wastes generated by the operations described above include "hazardous substances" as defined in 38 M.R.S.A. Section 1362.

8. In 1983, as part of DOD'S Installation Restoration Program (IRP), the Navy (the Naval Energy and Environmental Support Activity) prepared a report entitled Initial Assessment Study of Naval Air Station, Brunswick, Maine. The report indicated past use of at least nine sites on NAS Brunswick for the disposal of waste materials including, but not limited to: industrial solvents, acids, paint thinner, pesticides, transformer oil (possibly containing PCB's), demolition debris (including asbestos), and domestic waste. The sites identified are listed in Attachment II, attached hereto and made a part of this designation.
9. In 1984, NUS Corporation conducted a Field Investigation Team (FIT) Site Inspection at NASB for the U.S. Environmental Protection Agency ("EPA"). Analysis of surface soil samples collected during the site inspection identified the presence of pesticides and various organic compounds in several soil samples and a surface water sample obtained from Mere Brook indicated elevated levels of aluminum and arsenic.
10. In 1985, E.C. Jordan Co., a consulting firm under contract to the Navy, prepared for the Northern Division of the Naval Facilities Engineering Command a report entitled Brunswick Naval Air Station, Brunswick, Maine, Pollution Abatement Confirmation Study Step 1A Verification. Analysis of surface water and groundwater

indicated the presence of various organic compounds and iron and chromium at Sites 1, 2 & 3; methylene chloride and lead were detected in soil at Site 7. Surface water on the Site was found to be contaminated with chromium and lead at site 8.

11. On July 22, 1987, NASB was placed on the National Priorities List (NPL) (52 FR 27620), by EPA, effective August 21, 1987.
12. In April 1988, E.C. Jordan Co. prepared for the Northern Division of the Naval Facilities Engineering Command a document entitled Remedial Investigation / Feasibility Study Work Plan. This plan described the activities to be performed in investigating the Site and identifying and quantifying contamination at NASB caused by hazardous substances. Field work commenced in accordance with this document on June 20, 1988.
13. In January of 1989, E.C. Jordan prepared for the Northern Division of the Naval Facilities Engineering Command a document entitled Remedial Investigation / Feasibility Study Round 1 Data Package. Pertinent results are presented in Attachment III, attached hereto and made a part of this designation.
14. In March of 1989, E. C Jordan prepared for the Northern Division of the Naval Facilities Engineering Command a document entitled Remedial Investigation/Feasibility Study Round II Data Package. Pertinent results are presented in Attachment III, attached hereto and made a part of this designation.

15. Sites 1, 2, and 3 were used for landfills and are located in close proximity to each other and to Mere Brook. Leachate breakouts have been observed along the banks of Mere Brook near these sites. Chemical analysis of samples taken during the NUS Site Inspection, the Confirmation Study by E.C. Jordan and the Rounds 1 and 2 data packages by E.C. Jordan have documented contamination in surface water, sediment and leachate. Pertinent results are presented in Attachment III, attached hereto and made a part of this designation.

16. Site 8, the Perimeter Road disposal site, is located close to the northern perimeter of the base and is approximately 2000 feet east of the Jordan Avenue well field. Chemical analysis of samples taken during the Confirmation Study and Rounds 1 and 2 by E. C. Jordan documented the presence of contamination in surface water, leachate, and sediment. Some of these results are presented in Attachment IV, which is attached hereto and made a part of this designation.

17. The Maine Department of Human Services has established Maximum Exposure Guidelines (MEGs) for a number of potentially hazardous contaminants. Some of these MEGs are presented in Attachment V, which is attached hereto and made a part of this designation.

18. The compounds referred to in paragraphs 9, 10, 11, 12, 13, 14, 15 & 16 exhibit the following characteristics and therefore may pose a threat to the public health and safety or to the environment in the event that they are released or discharged into the environment:

A. Methylene Chloride

Colorless volatile liquid with an ether-like odor which is not noticeable at dangerous concentrations. Known to be metabolized to carbon monoxide in the organism. Acute inhalation causes disturbances in central and peripheral nervous systems. Fatalities due to exposure have been attributed to cardiac injury and heart failure. It has been found to be mutagenic in a bacterium-based assay system.

(Source: The Condensed Chemical Dictionary, Tenth Ed., 1981; and Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the U.S. EPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985).

Methylene chloride is classified as Hazardous Waste #U080 under the Department's Hazardous Waste Management Rules.

B. 1,2-Dichloroethane (Ethylene dichloride)

Heavy liquid, burns with smoky flame; pleasant odor; sweet taste; vapors are irritating to respiratory tract and conjunctiva, causes corneal clouding, equilibrium disturbances, narcosis, abdominal cramps. This substance has been listed as a carcinogen by the EPA.

(Source: The Merck Index, Tenth Edition published by Merck and Co., Inc., Rahway, N.J. 1983).

1,2-Dichloroethane is classified as Hazardous Waste #U077 under the Department's Hazardous Waste Management Rules.

C. 1,1-Dichloroethane (Ethylidene chloride)

Oily liquid; odor and taste as of chloroform. Causes central nervous system depression, skin irritation, liver and kidney damage. Narcotic in high concentration.

(Sources: The Merck Index, Tenth Edition published by Merck and Co., Rahway, N. J. 1983; and NIOSH Pocket Guide to Chemical Hazards, DHEW (NIOSH) Publication No. 85-114).

1,1-Dichloroethane is assigned Hazardous Waste #U076 under the Department's Hazardous Waste Management Rules.

D. 1,2-Dichloroethene (Acetylene Dichloride,
1,2-Dichloroethylene)

Liquid, slightly acid odor; gradually decomposed by air and moisture forming HCL. High concentrations are irritant and narcotic.

(Source: The Merck Index, Tenth Edition, Merck and Co., Inc. Rahway, N.J. 1983).

1,2-Dichloroethylene (syn. 1,2-dichloroethylene) is assigned Hazardous Waste #U079 by the Department's Hazardous Waste Management Rules.

E. 1,1,1-Trichloroethane

Colorless, non-flammable liquid. Insoluble in water. In humans 1,1,1-TCA is irritating to the eyes, mucous membranes, and, in high concentrations causes central nervous system depression. Available data suggests that this chemical may be carcinogenic.

(Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the U.S. EPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985; and The Condensed Chemical Dictionary, Tenth Ed., 1981).

1,1,1-Trichloroethane is assigned Hazardous Waste #U226 under the Department's Hazardous Waste Management Rules.

F. Trichloroethylene

Colorless, non-flammable, mobile liquid. Characteristic odor resembling that of chloroform. Practically insoluble in water. Toxic by inhalation or ingestion. TCE is carcinogenic to mice after oral administration producing hepatocellular carcinomas. It was found to be mutagenic using several microbial assay systems. Chronic exposure to TCE has caused renal toxicity, hepatotoxicity, neurotoxicity and dermatological reactions in animals.

(Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the U.S. EPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985; and The Condensed Chemical Dictionary, Tenth Ed., 1981).

Trichloroethylene is assigned Hazardous Waste #U228 under the Department's Hazardous Waste Management Rules.

G. 1,1,2,2-Tetrachloroethane

Colorless to pale yellow liquid with a sickly sweet odor like chloroform. Narcotic in high concentrations. Defatting action on skin can lead to dermatitis.

[Source: The Merck Index, Tenth Edition, Merck and Co., Inc., Rahway, N.J. 1983 and The NIOSH Pocket Guide to Chemical Hazards, DHEW (NIOSH) Publication No. 85-114].

1,1,2,2-Tetrachloroethane is assigned Hazardous Waste #U209 under the Department's Hazardous Waste Management Rules.

H. Tetrachloroethylene (TETCY)

Colorless, non-flammable liquid, ether-like odor. Insoluble in water. Irritant to eyes and skin. TETCY induced liver tumors when administered orally to mice and was found to be mutagenic using a microbial assay system. Animals exposed by inhalation to TETCY exhibited liver, kidney and central nervous system damage.

(Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the U.S.EPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985; and The Condensed Chemical Dictionary, Tenth Ed., 1981).

Tetrachloroethylene is assigned Hazardous Waste #U210 under the Department's Hazardous Waste Management Rules.

I. Toluene

Colorless liquid with an aromatic odor like benzene.

Flammable, irritating vapor is produced when combined with water. Irritating to skin and eyes. If swallowed, will cause nausea, vomiting, or loss of consciousness. Acute exposure depresses the central nervous system and causes narcosis.

(Sources: NIOSH/OSHA Pocket Guide to Chemical Hazards, DHEW (NIOSH) Publication No. 78-210; A Condensed Guide to Chemical Hazards, Manual One, (CHRIS), U.S. Coast Guard; and Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the U.S. EPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985).

Toluene is assigned Hazardous Waste #U220 under the Department's Hazardous Waste Management Rules.

J. Xylene

Xylene is a colorless liquid with aromatic odors. Exposure to high levels affects the central nervous system and irritates the mucous membranes.

[Sources: NIOSH/OSHA Pocket Guide to Chemical Hazards, DHEW (NIOSH) Publication No. 78-210; and Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the U.S. EPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985].

Xylene is assigned Hazardous Waste #U239 under the Department's Hazardous Waste Management Rules.

K. Methyl ethyl ketone (MEK) (2 Butanone)

Clear, colorless liquid with a fragrant, mint-like, moderately sharp odor. Flammable and very soluble in water. High doses affect the nervous system and irritate the eyes, mucous membranes, and skin.

[Sources: The Condensed Chemical Dictionary, Tenth Ed., 1981; NIOSH/OSHA Pocket Guide to Chemical Hazards, DHEW (NIOSH) Publication No. 78-210; and Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for US EPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985].

Methyl ethyl ketone is assigned Hazardous Waste #U159 under the Department's Hazardous Waste Management Rules.

L. Acetone

Colorless liquid with a fragrant, mint like odor.

Inhalation may produce headache, fatigue, excitement, bronchial irritations, and, in large amounts, narcosis.

(Source: The Merck Index, Tenth Edition, Merck and Co., Inc., Rahway, N.J. 1983, NIOSH Pocket Guide to Chemical Hazards, DHEW (NIOSH) Publication No. 85-114).

Acetone is assigned Hazardous Waste #U002 under the Department's Hazardous Waste Management Rules.

M. DDT (Dichlorodiphenyltrichloroethane):

Polychlorinated nondegradable pesticide. Poisoning may occur by ingestion or by absorption through skin or respiratory tract. Solvents such as kerosene increase toxicity. Chronic effects include hepatic damage, central nervous system degeneration, agranulocytosis, dermatitis, weakness, convulsions, coma, and death.

[Source: The Merck Index, Tenth Edition, The Merck Co., Inc., Rahway, N.J. 1983, NIOSH Pocket Guide to Chemical Hazards, DHEW (NIOSH) Publication No. 85-114.]

DDT is assigned Hazardous Waste #U061 under the Department's Hazardous Waste Management Rules.

N. Chlordane

Thick, amber liquid with a chlorine-like odor. Causes irritability, convulsions, deep depression. Continued ingestion may cause degenerative changes in liver.

(Source: The Merck Index Tenth Edition, The Merck Co., Inc., Rahway, N.J. 1983, NIOSH Pocket Guide to Chemical Hazards).

Chlordane is assigned Hazardous Waste #U036 under the Department's Hazardous Waste Management Rules.

O. Cadmium

Soft, bluish-white metal obtained as a by-product from the treatment of copper, lead, and iron ores. Electroplating is the major industrial use of cadmium. Compared with other heavy metals, cadmium is relatively mobile in the aquatic environment.

Cadmium is carcinogenic in animals exposed to it by inhalation and is a known animal teratogen and reproductive toxin. Other toxic effects attributed to cadmium include renal dysfunction (in animals and humans), immunosuppression (in animals), anemia (in humans), pulmonary disease (in humans), defects in sensory function, and bone damage. The acute LD50 for freshwater fish and invertebrates ranges from 100-1000 mg/l.

(Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites; U.S. EPA, September, 1985; The Merck Index, Tenth Edition, 1983).

Cadmium has been identified as a toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act.

P. Chromium

Steel-gray, lustrous metal which generally exists in either a trivalent or hexavalent oxidation state. Hexavalent chromium is relatively soluble; trivalent chromium is relatively insoluble.

Hexavalent chromium compounds can cause DNA and chromosome damage as well as kidney damage in animals and humans. Inhalation of hexavalent chromium salts causes irritation and inflammation of the nasal mucosa. Workers exposed to hexavalent chromium have shown an increased incidence of lung cancer. Trivalent chromium is less toxic than hexavalent chromium; its main effect is contact dermatitis in sensitive individuals.

In the aquatic environment, trivalent chromium is more acutely toxic to fish than hexavalent chromium. Hexavalent chromium has greater long term chronic effects.

(Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites; U.S. EPA, September, 1985; The Merck Index, Tenth Edition, 1983).

Chromium has been identified as a toxic pollutant under Section 307 (a) of the Federal Water Pollution Control Act.

Q. Lead

Bluish -white, silvery-gray metal. Some lead compounds are readily soluble in water.

Exposure to lead can cause toxic effects in the brain and central nervous system, the peripheral nervous system, and the kidneys. Chronic exposure to lead by ingestion or inhalation can result in permanent brain damage. Exposure to relatively low levels of lead may cause permanent learning disabilities in children. There is evidence that some lead salts are carcinogenic inducing kidney tumors in mice and rats. There is also evidence that lead may be a reproductive hazard.

(Source: Chemical, Physical and Biological Properties of Compounds Present at Hazardous Waste Sites; U.S. EPA, September, 1985; The Merck Index, Tenth Edition, 1983).

Lead has been identified as a toxic pollutant under Section 307 (a) of the Federal Water Pollution Control Act.

R. Arsenic

Appearance and odor vary. Most forms of arsenic are toxic. Acute symptoms following ingestion relate to irritation of the G.I. tract: nausea, vomiting and diarrhea which can progress to shock and death. Chronic poisoning can result in exfoliation and pigmentation in skin, herpes, polyneuritis, altered hematopoiesis, degeneration of liver and kidney. This substance and certain arsenic compounds have been listed as carcinogens by the EPA.

[Source: The Merck Index, Tenth Edition, 1983, NIOSH Pocket Guide to Chemical Hazards. DHEW (NIOSH) Publication No. #85-114.]

Arsenic has been identified as a toxic pollutant under Section 307 (a) of the Federal Water Pollution Control Act.

S. Polynuclear Aromatic Hydrocarbons (PAHs)

PAH's are extremely insoluble in water. They are rather persistent in the environment and some are carcinogenic both at the site of application and systemically. Also, cause skin disorders and immunosuppression and, in general, have adverse effects on the liver and kidney.

[Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for US EPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985; and Contaminated Drinking Water and Your Health, W.L. Lappenbusch, 1986].

Chrysene and Fluoranthene are PAH's found at the Site which are classified as Hazardous Waste under the Department's Hazardous Waste Management Rules (#U050 & #U120).

T. Cyanide(s)

Cyanide can be present in many forms. Its mobility in the environment and its toxicity are dependent upon the form.

Hydrogen cyanide and simple cyanide salts such as sodium cyanide are highly toxic following acute exposure to humans, experimental animals and both aquatic and terrestrial wildlife. Sodium cyanide may be fatal if inhaled, swallowed, or absorbed through the skin. Cyanide is acutely toxic to aquatic organisms causing death at levels of approximately 50 micrograms/liter in sensitive species. Chronic exposure to free cyanide in the 10-50 microgram/liter range results in reduced survival and reduced reproduction in fish.

[Source: the Merck Index, Tenth Edition, 1983; Chemical Emergency Preparedness Program: Interim Guidance Chemical Profiles, U.S. EPA December, 1985; Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites; U. S. EPA, September, 1985.]

Sodium cyanide is classified as Hazardous Waste #P106 and soluble cyanide salts as Hazardous Waste #P030 under the Department's Hazardous Waste Management Rules.

U. Mercury

Several forms of mercury, including insoluble elemental mercury, inorganic species, and organic species can exist in the environment. Both organic and inorganic forms of mercury are reported to be teratogenic and embryotoxic in experimental animals. In humans, prenatal exposure to methyl mercury has been associated with brain damage. Other major target organs for organic mercury compounds in humans are the central and peripheral nervous system and the kidneys. In animals, toxic effects also occur in the liver, heart, gonads, pancreas and gastrointestinal tract.

Inorganic mercury is generally less acutely toxic than organic mercury compounds, but it does adversely effect the central nervous system.

[Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the USEPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985.]

Mercury is classified as Hazardous Waste #U151 under the Department's Hazardous Waste Management Rules.

Mercury has also been identified as a toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act.

V. Polychlorinated Biphenyls ("PCBs")

Highly toxic, persistent, and relatively insoluble in water. PCBs tend to bioaccumulate in body tissues and can be biomagnified; therefore, their toxicity increases with length of exposure and position of the exposed species on the food chain.

PCBs will not readily undergo transformation in the environment and are thus fairly stable. They have a high affinity for sediments and soil particles.

PCBs are potential human carcinogens and co-carcinogens.

PCBs are toxic to humans and animals, particularly affecting the liver, gastrointestinal tract, and nervous system.

Reproductive and neurobiological effects of PCBs have been reported in rhesus monkeys at the lowest dose level tested, 11 ug/kg body weight/day over a period of several months.

[Source: Chemical, Physical, and Biological Properties of Compounds Present at Hazardous Waste Sites, prepared for the USEPA by Clement Associates, Inc., Arlington, Virginia, September 27, 1985; and The Condensed Chemical Dictionary, Tenth Ed., 1981.]

PCBs are identified as hazardous wastes and are assigned the Hazardous Waste Number M002 under the Department's Hazardous Waste Management Rules.

19. 38 M.R.S.A. Section 1362(1) defines "hazardous substance" as:

- A. Any substance identified by the Board of Environmental Protection under [38 M.R.S.A.] Section 1319-0 [hazardous wastes];
 - B. Any substance identified by the Board under [38 M.R.S.A.] Section 1319 [hazardous matter];
 - C. Any substance designated pursuant to the United States Comprehensive Environmental Response, Compensation and Liability Act of 1980, Public Law 96-510, Sections 101 and 102 (Superfund);
 - D. Any toxic pollutant listed under the United States Federal Water Pollution Control Act, Section 307(a);
 - E. Any hazardous air pollutant listed under the United States Clean Air Act, Section 112;
 - F. Any imminently hazardous chemical substance or mixture with respect to which the Administrator of the United States Environmental Protection Agency has taken action pursuant to the United States Toxic Substances Control Act, Section 7;
- and,

- G. Waste oil as defined in [38 M.R.S.A.] Section 1303.
20. The substances listed in paragraph 15 subparagraphs A through V have been designated as hazardous wastes by the Board of Environmental Protection pursuant to 38 M.R.S.A. Section 1319-0, as hazardous substances under the U.S. Comprehensive Environmental Response Compensation and Liability Act of 1980 or as toxic pollutants pursuant to the United States Federal Water Pollution Control Act, Section 307(a). They are, accordingly, hazardous substances within the meaning of 38 M.R.S.A. Section 1362. These substances are being, or have been, stored, spilled, or disposed of at the Site in such a manner that they have been or are being released or discharged into the soil and groundwater, and may be discharging to surface water.
21. 38 M.R.S.A. Section 1362(2) defines "responsible party" as one or more of the following persons:
- A. The owner or operator of the uncontrolled site;
 - B. Any person who owned or operated the uncontrolled site from the time any hazardous waste arrived there;
 - C. Any person who arranged for the transport or handling of a hazardous substance, provided that the hazardous substance arrived at the uncontrolled site; and,

- D. Any person who accepted a hazardous substance for transport, provided that the substance arrived at the uncontrolled site.

Conclusions

Based on the above Findings and Fact, the Commissioner concludes the following:

1. Hazardous substances, as defined in 38 M.R.S.A. Section 1362 have been handled and disposed of at the Naval Air Station, Brunswick Site. These substances have entered and continue to enter the soil and groundwater beneath the Site and the surface waters which drain the Site.
2. Hazardous substances handled and disposed of at the Naval Air Station, Brunswick Site create a danger to the public health and safety of any person and to the environment.
3. Continued danger to the public health or safety of any person or to the environment exists as a result of the continued unabated presence of hazardous substances at the Site and the proximity of the Site to residential areas of Brunswick, including public and private drinking water supplies.
4. The actual or threatened releases of hazardous substances from the Site pose a threat or hazard to the public health, safety or welfare and to the natural environment.

5. The U.S. Department of the Navy, as the owner and operator of the Site is a responsible party as defined in 38 M.R.S.A. Section 1362(2).

6. Remedial action is necessary to abate the threat, danger or hazard to the public health and safety and to the environment posed by the Site.

THEREFORE, pursuant to 38 M.R.S.A. Section 1365, the Commissioner hereby DESIGNATES the Naval Air Station Site in Brunswick, Maine an Uncontrolled Hazardous Substance Site.

DONE AND DATED AT AUGUSTA, MAINE, THIS

7th

DAY OF

August.

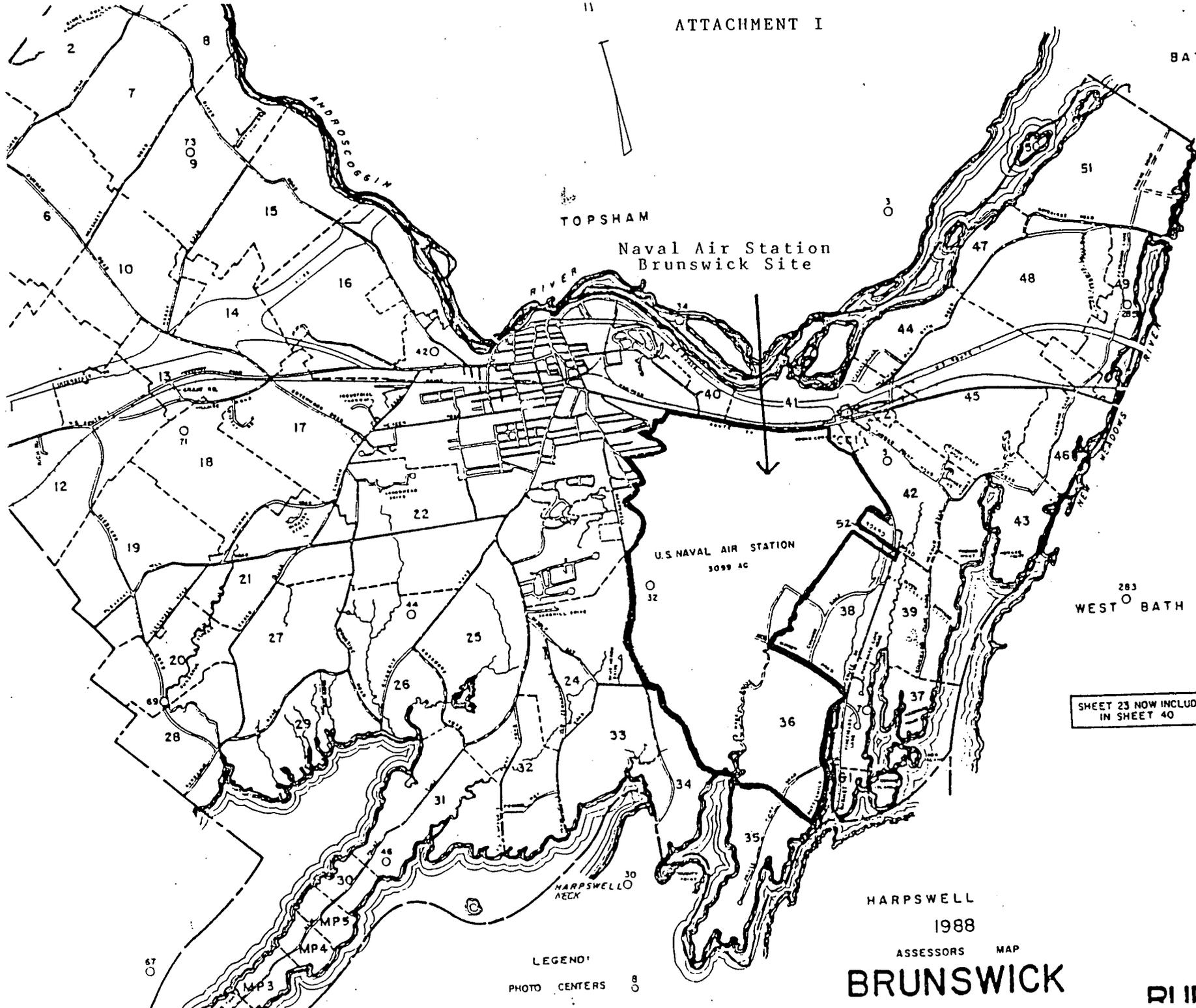
1989.

BY:

Dean C. Marriott

DEAN C. MARRIOTT, COMMISSIONER

DMBOUSNAV:ldp



TOPSHAM

Naval Air Station
Brunswick Site

U.S. NAVAL AIR STATION
3099 AC

WEST BATH

SHEET 23 NOW INCLUDED
IN SHEET 40

HARPSWELL

1988

ASSESSORS MAP

BRUNSWICK

RIIRAI

LEGEND
PHOTO CENTERS

ATTACHMENT II

Site 1) Landfill Orion Street area-North

This site is a large open area of more than 10 acres. The site was used as a trench fill operation from approximately the mid 1950's to 1975. The Initial Assessment Study concluded that there probably was water in the trenches at least seasonally. Refuse was hauled to the site 8 hours a day. Wastes alleged to have been placed in the landfill included garbage, refuse, food waste, waste oil, solvents, paint wastes, aircraft and automobile parts and unknown chemicals. Specific wastes included empty hazardous chemical containers and degreasers. The IAS concluded that the volume of the waste is at least 47,500 cubic yards and is probably much higher. Mere Brook is the nearest receptor of leachate from the site.

Site 2) Landfill Orion Street area-South

This landfill is less than 5 acres in size and was used as the main NASB disposal area from 1951 to 1955, probably as an area fill operation. Wastes present are similar to those at Site 1, but the quantity is much less, approximately 15,000 cubic yards. The most probable leachate receptor is Mere Brook.

Site 3) Hazardous Waste Burial Area

According to the Initial Assessment Study, this site is a small area adjacent to the steep bank of Mere Brook where containers were placed on the ground and covered. It is not clear whether this activity took place over the course of several years or was a one time operation. Wastes attributed to the site include twenty to twenty-five 5 gallon containers of isopropyl alcohol, twenty five 5 gallon containers of decontaminating agent (tetrachloroethane and dichloro dimethylhydantoin), fifty to sixty gallons of outdated paint and five to ten 5 gallon containers of solvents. The site cover is thin and container rims are visible. Erosion combined with container deterioration would result in discharge to Mere Brook.

Site 4) Acid/Caustic Pit

An open pit (4'x4' x 3' deep) was used at this site from approximately 1969-1974 for disposal of liquids directly to the ground. More than 1000 pounds of transformer oils possibly containing PCBs, 400 gallons of battery acid, over 1000 gallons of solvents, and unknown quantities of caustics and paint thinners were disposed of. The pit itself has been covered by Building 584 and adjacent pavement.

Site 5) Asbestos Disposal Site

This site consists of two trenches, one 3' x 20' x 7' deep which contains six 1" diameter asbestos pipe of lengths varying from 4'-12', and one trench 15' x 30' x 10' deep which contains asbestos pipe. The site is well covered and was closed according to DEP guidance.

Site 6) Rubble and Asbestos Disposal Site

According to the IAS, this area appears to have originally been a small depression which was used for the disposal of rubble. Asbestos lined pipe can be seen protruding from the rubble.

Site 7) Old Acid/Caustic Pit

This site was used by the Defense Property Disposal Office (DPDO) from 1952 to 1969 as a liquid waste disposal area. Over 1000 pounds of transformer oil potentially containing PCBs and more than 1000 gallons of solvents and unknown quantities of battery acid and caustics were poured into the soil in the pit. The site is approximately 1 mile east-southeast of the Jordan Avenue well field.

Site 8) Perimeter Road Landfill Site

This site was used as a trench fill operation from 1964 to 1974. Interviews with personnel for the IAS indicated that construction and demolition debris, rubble, scrap metal, trash and more than 1000 pounds of solvents were dumped into the naturally occurring ravine at the site. The site is 2000 feet east of the Jordan Avenue well field, and leachate breakouts can be seen in a tributary stream to the Androscoggin River.

Site 9) Neptune Drive Disposal Site

This site was used for the disposal of incinerator ash, burning of solvents, and solid waste disposal. The exact dates of operation are unclear. The site is adjacent to two small streams that form an unnamed tributary to Merriconeag Stream.

Site 11) Fire Training Area

According to the Draft Additional Sampling Plan submitted by the Navy in April 1989 and conditionally approved by the DEP in June of 1989, this site was used throughout the 1950's for firefighter training. Various combustibles including fuel, oil and solvents were burned directly on the ground.

Site 12) EOD Training Area

According to the Draft Additional Sampling Plan submitted by the Navy in April 1989 and conditionally approved by the DEP in June of 1989, this site was the disposal area for small quantities of ordnance, pyrotechnics, privately manufactured explosives and war souvenirs. The site has been used since 1981. The site is potentially contaminated by low levels of unburned explosive residues and elevated concentrations of lead, cadmium, chromium and mercury.

ATTACHMENT III

Soil Sites 1, 2 & 3

Volatile Compounds Maximum Reported Concentration, (µg/kg)

Methylene Chloride	17000
1,2-Dichloroethene	210
1,1,2,2,-Tetrachloroethane	1800
Toluene	10
2-Butanone	3200
Xylene	26

Semi-Volatile Compounds Maximum Reported Concentration, (µg/kg)

Chrysene	470
Fluoranthene	470

Pesticides Maximum Reported Concentration, (µg/kg)

Chlordane	1900
4,4'-DDT	52000
4,4'-DDD	4900

MetalsMaximum Reported Concentration, µg/kg

Aluminum	100,000,000
Arsenic	35
Chromium	56
Iron	210,000,000

GROUNDWATER-SITES 1,2,3Volatile Organic Compounds Maximum Reported Concentration, (µg/l-ppb)

Methylene Chloride	44
1,1-Dichloroethane	31
1,2-Dichloroethene	51
Trichloroethene	200
Trans 1,2-Dichloroethylene	18
1,1,1-Trichloroethane	230
Trichloroethylene	120
Tetrachloroethylene	8.2
Xylene	660

Metals Maximum Reported Concentration, µg/l

Aluminum	5200
Arsenic	29
Cadmium	2
Chromium	15
Iron	110,000

SURFACE WATER-SITES 1,2,3

Metals Maximum Reported Concentration, µg/l

Arsenic	11,000
Chromium	15
Iron	700,000

SEDIMENT-SITES 1,2,3

Volatile Organic Compounds Maximum Reported Concentration, $\mu\text{g}/\text{kg}$

Methylene Chloride	14,000
1,4-Dichlorobenzene	6800
1,1,2-Trichlorethane	440
1,1,2,2-Tetrachloroethane	3700
Toluene	1600
Acetone	2900

Semi-Volatile Organic Compounds Maximum Reported Concentration, $\mu\text{g}/\text{kg}$

Fluoranthene	1700
--------------	------

Metals Maximum Reported Concentration, $\mu\text{g}/\text{kg}$

Aluminum	27,000
Iron	420,000
Lead	73

LEACHATE-SITES 1,2,3

Volatile Organic Compounds Maximum Reported Concentration, µg/l

1,2-Dichloroethene	140
1,1,2,2-Tetrachloroethane	1100

Metals Maximum Reported Concentration, µg/l

Aluminum	110,000
Cadmium	180
Iron	310,000
Lead	720
Zinc	3000
Barium	1800
Arsenic	3600
Mercury	17

ATTACHMENT IV

Site 8 Surface Water Maximum Reported Concentration (µg/l)

Cyanide	37
Chromium	20
Lead	33

Site 8 Leachate Maximum Reported Concentration (µg/l)

Lead	738
Iron	480,000

Site 8 Sediment Maximum Reported Concentration, (µg/kg)

Total PAH's	32,800
4,4'-DDT	58
AROCLOR - 1248	440

ATTACHMENT V

Contaminant	Maximum Exposure Guideline
A. Inorganics	mg/l
Aluminium	1.43
Arsenic	0.03
Barium	1.0
Cadmium	0.005
Chromium	0.05
Lead	0.02
Mercury	0.002
B. Pesticides	
Chlordane	0.00027
DDT	0.00083
C. Halogenated Organics	
Trans 1,2 Dichloroethylene	0.07
Trichloroethylene	0.005
Tetrachloroethylene	0.003
D. Organics (Non halogenated)	
2 Butane (Methyl ethly Ketone)	0.17
Toluene	0.1
Xylenes	0.4



DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333
ADMINISTRATIVE ORDER
IN THE MATTER OF

Signed
8/27/83

F. H. VAHLSING, JR. PRESIDENT and) DESIGNATION OF UNCONTROLLED
VAHLSING, INC.)
) HAZARDOUS SUBSTANCE SITE
)
Proceeding Under 38 M. R. S. A.)
Section 1365, Uncontrolled Hazardous) & ADMINISTRATIVE ORDER
Substance Sites)

JURISDICTION

This Designation of Uncontrolled Hazardous Substance Site and Administrative Order is issued pursuant to the authority vested in the Commissioner of Environmental Protection under the Uncontrolled Hazardous Substance Sites Law, 38, M. R. S. A., Sections 1361-1370.

FINDINGS OF FACT

1. F.H. Vahlsing, Jr. is President of Vahlsing, Inc. Vahlsing, Inc. is a corporation organized and existing under the laws of the State of Delaware. F.H. Vahlsing, Jr. and Vahlsing, Inc. are hereinafter referred to as "Vahlsing."
2. Vahlsing is the owner of one building, formerly a potato house, and was the owner of that building during which time that chemicals, including hazardous substances, were brought to and placed in the building. The building is located on land in Easton, Maine, owned by Bangor and Aroostook Railroad. The land is described as being Lot 19 on Map 14 which is on file at the Assessor's Office in the Town of Easton.

Vahlsing has leased the land upon which the building is located from the Bangor and Aroostook Railroad since 1971. In March 1983, Vahlsing received notification from the Railroad that the property lease would be cancelled if the rent for the years 1978-1983 was not paid. The rent was paid in July 1983 although a new lease agreement which had been forwarded to Vahlsing was never fully executed. According to the Railroad, Vahlsing continues to lease the property.

The building and land are hereinafter referred to as "the site."

- ✓ 3. Over 2,500 gallons of chemicals, including hazardous substances are located at the site in containers of various sizes and condition.
4. Vahlsing is storing or has disposed of, among others, the following hazardous substances at the site:
 - a. 2,4-dinitro-6-(1-methylpropyl)-phenol (dinoseb)
 - b. arsenic
 - c. corrosive liquid
5. These substances exhibit the following characteristics and threats to public health and safety in the event they are released into the environment:

a. 2,4-dinitro-6-(1-methylpropyl)-phenol (dinoseb)

Dinoseb is highly toxic by oral and dermal exposure. Human deaths have occurred from ingestion, with convulsions and vomiting seen. Long term exposures of some animals to non-fatal doses have caused cataracts and reduced growth. The acute oral LD50 (rat) is reported variously as 25-30 mg/kg.

This substance is classified as acutely toxic hazardous waste #P020 under the Department of Environmental Protection's Hazardous Waste Management Rules.

b. Arsenic Compound

The signs and symptoms of arsenic poisoning vary in degree and timing depending on the form and amount of arsenic and other factors. The major characteristics of acute arsenic poisoning are profound gastrointestinal damage and cardiac abnormalities. The signs include excruciating abdominal pain, forceful vomiting, cramps in the legs, restlessness and spasms. A feeble and irregular pulse and other symptoms of collapse, prostration, stupor, convulsions, paralysis, collapse and death in coma have been described. Environmental exposure to arsenicals has been correlated with a high skin cancer risk among populations exposed to sunlight, suggesting interference with repair of DNA damage.

This substance is classified as EP Toxic Hazardous Waste #D004 under the Department of Environmental Protection's Hazardous Waste Management Rules.

c. Corrosive Liquid

A solution of this strength of acidity is comparable to a 0.6% solution of hydrochloric acid (muriatic acid). It is corrosive, dangerous to eyes and irritating to less sensitive tissues.

This substance is classified as Hazardous Waste #D002 due to corrosivity under the Department of Environmental Protection's Hazardous Waste Management Rules.

6. The substances described in Paragraph 5 have been designated as hazardous wastes by the Board of Environmental Protection pursuant to 38 M.R.S.A., Section 1303-A. They are, accordingly, hazardous substances within the meaning of 38 M.R.S.A., Section 1361. These substances are being or have been stored or disposed of at the site in such a manner that they may be released or discharged into the soil, groundwater or ambient air.
7. Vahlsing has violated 38 M.R.S.A., Section 1306, and related Hazardous Waste Management Rules for operating a waste facility without a permit issued by the Board.

In addition, Vahlsing has violated Hazardous Waste Management Rules relating to Standards for the Generators of Hazardous Waste.

8. The structural integrity of the building is rapidly decreasing. A portion of the roof has collapsed and other roof-supporting structures have become distorted from the stress. Falling timbers have the potential of rupturing the containers and releasing the hazardous substances. A majority of the containers of hazardous substances are located within a flooded area of the potato house. Contact with this water decreases the life expectancy of the containers. A release of hazardous substance from either a ruptured or rusted container will contaminate this water and any surface water or ground water that it comes in contact with.

9. On December 1, 1983, a Letter of Warning was mailed from this Department to F.H. Vahlsing, Jr. directing him to properly remove the chemicals from the site. No reply was received by this Department.

On January 17, 1984, a second Letter of Warning was mailed to F.H. Vahlsing, Jr. and F.H. Vahlsing, Jr. signed for the certified letter.

On July 5, 1984, the Department mailed, by certified mail, two letters to F.H. Vahlsing, Jr. at two different locations. The letters explained the Department's intention to declare the site uncontrolled if plans for the site clean-up were not received within 5 days of receipt of the notification. Both letters were returned unclaimed.

BASED upon the above Findings of Fact, the Commissioner concludes and finds that:

1. Vahlsing stores or has disposed of hazardous substances, as defined in 38 M.R.S.A., Section 1362, at the site;
2. Vahlsing and the Bangor and Aroostook Railroad are responsible parties as defined in 38 M.R.S.A., Section 1362;
3. Hazardous substances located at the site may create a danger to public health or safety of persons or to the environment;
4. Continued danger to public health or safety of any person or to the environment exists as a result of the lack of security at the site and the presence and condition of the hazardous substances on the site.
5. The actual or threatened releases of hazardous substances from the site pose a threat or hazard to the public health, safety or welfare and to the natural environment; and
6. Immediate action is necessary to abate the threat, danger or hazard to public health, safety and the environment.

THEREFORE, pursuant to 38 M.R.S.A., Section 1365, the Commissioner hereby DESIGNATES the Vahlsing site in Easton, Maine as an Uncontrolled Hazardous Substance Site.

ORDER

Vahlsing, is hereby ordered and directed to:

1. Within five (5) days:

- A. Prepare a plan to properly remove all hazardous wastes, contaminated soil and water from the site for transport to and disposal at a licensed hazardous waste facility, submit that plan to the DEP for its review and approval, and implement that plan as approved by the DEP within five (5) days of DEP approval.

2. Vahlsing shall comply immediately with this Order.

DONE AND DATED AT AUGUSTA, MAINE THIS 27TH DAY OF AUGUST, 1984.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: 

Henry E. Warren, Commissioner

RIGHTS OF REVIEW AND APPEAL

Vahlsing may apply to the Board of Environmental Protection for a hearing on this Order. The hearing shall be held by the Board within 3 days after receipt of the application. Within 7 days after the hearing, the Board shall make findings of fact and continue, revoke or modify the Order. The decision by the Board may be appealed to Superior Court in accordance with the Maine Administrative Procedure Act, 5 M.R.S.A., Section 11001, et seq.