

# MAHONEY & DOUGLAS, LTD.

ENVIRONMENTAL SERVICES

P.O. Box 473 • FALMOUTH, MA 02541 • TEL: (508) 457-1788 • FAX: (508) 457-9995

fax transmittal

To:

George Papadopolous - EPA - RGP-NOC  
Processing

Fax #:

617-918-0505

From:

Wate Mahoney

Date:

4/7/06

RE:

NMLC - RGP - Application

Pages:

~~11~~<sup>20</sup>, including cover sheet.

Hi George:

The following pages include the RGP-NOI form,  
the cover letter, USGS Topo of Bourne, and a Site Plan  
(since revised and included w/ hard copy of submittal),  
and treatment system schematic.

Thank you for your assistance. Please do not hesitate  
to contact me with any questions, comments or concerns.

The lab reports will be faxed separately  
this evening.

Sincerely,

Wate



# MAHONEY & DOUGLAS, LTD.

## ENVIRONMENTAL SERVICES

P.O. Box 473 • Falmouth, MA 02541 • Tel: (508) 457-1788 • Fax: (508) 457-9995

April 6, 2006

Mr. George Papadopolous  
US-EPA Region 1  
RGP-NOC Processing  
Municipal Assistance Unit (CMU)  
1 Congress Street  
Boston, MA 02114-2023

RE: EPA Remediation General Permit Notice of Intent (RGP - NOI)  
National Martine Life Center  
120 Main Street, Buzzards Bay, MA 02532  
SE 7-1592  
RTN 4-10373 and 4-1348

Dear Mr. Papadopolous:

On behalf of the property owner, the Town of Bourne, Mahoney & Douglas, Ltd. (M&D) is submitting this Notice of Intent for an EPA Remediation General Permit (RGP-NOI) to treat and discharge petroleum contaminated groundwater from the project facility, known as the National Marine Life Center (NMLC), during site construction redevelopment. This work is being conducted as part of a Utility Release Abatement Measure (URAM) at the NMLC (the Site) according to the Massachusetts Contingency Plan (MCP), per 310 CMR 40.0460. Refer to the USGS Topographic Map of Bourne showing the Property Locu<sup>s</sup>, included as Figure 1.

### Dewatering Areas

The construction activities are anticipated to be initiated in May 2006. Groundwater will be encountered during excavation in the following locations of the construction work zone:

- Along the new Utility Trench, which will connect services between the existing on-site building and the new Utility Building, and,
- At one or two (1-2) receiving pits located adjacent to the new Utility Building, which will be excavated to facilitate the start of the directional drilling and the connection of the seawater intake and discharge piping to the new Utility Building.

Refer to the Site Design Plan (TEC Sheet C 2.0 and C 3.0) showing the construction work zone and other pertinent features of the dewatering flow schematic, included as Figure 2.

Town of Bourne-NMLC  
 NPDES RGP-NOI  
 120 Main St., Buzzards Bay, MA  
 RTN: 4-10373  
 4/6/06

Page 2 of 4

### Dewatering and Treatment System

Once groundwater is encountered during excavation activities, a groundwater recovery sump will be placed in the excavation. A submersible pump will be placed in the sump to remove groundwater, which will be directed to a Frac Tank to temporarily store the groundwater. The Frac Tank, which will be sized between 10,000 - 21,000 gallons, will serve as a sedimentation and separation tank. The stored groundwater will then be pumped from the Frac Tank to the treatment system.

The storage and treatment system schematic consists of the following:

Frac Tank → (1) 50-micron bag filter → (2) 2,000 - 6,000 pound liquid-phase granulated activated carbon (GAC) vessels piped in-series.

The GAC drums are designated as GAC #1 and GAC #2. Refer to the dewatering and treatment system schematic, included as Figure 3.

### Compounds of Concern in the Influent and Effluent

A composite groundwater sample was collected from six (6) of the existing on-site monitoring wells to be representative of the influent sample to the groundwater treatment system. Based upon the untreated influent sample, the parameters that are "believed present" in the potential discharge include:

- Total Suspended Solids (TSS), Ethylbenzene, Naphthalene, 2-Methylnaphthalene, Dichloromethane, Antimony, Arsenic, Chromium, Copper, Lead, Nickel, Selenium, Zinc and Iron.

Based upon historic laboratory analytical results of groundwater collected from monitoring wells on-site, the other parameters that are "believed present" in the potential discharge include:

- Total Petroleum Hydrocarbons (TPH), Benzene, Toluene, and MTBE.

A dilution factor was applied to the metals in the influent based upon the discharge to the Cape Cod Canal. According to a study and calculations completed for the Massachusetts Maritime Academy in 1987, the Cape Cod Canal has a dilution factor of between 500 to 2,500 times. According to the Army Corp of Engineers, the Cape Cod Canal has a complete turnover of water every one and one-half (1 ½) tide cycles. Using the more conservative dilution factor of 500, each of the metals identified would be below the minimum levels allowed and, therefore, would be "believed absent". Refer to the table of results, below.

DILUTION RESULTS FOR METALS DISCHARGING TO CAPE COD CANAL

METAL	Minimum Level (ug/L)	Lab Result (ug/L)	Dilution Result (ug/L)	Effluent Limit (ug/L)
Antimony	5	<60	0.12	5.6
Arsenic	5	<10	0.02	36
Chromium III	10	20	0.04	100
Copper	5	34	0.068	3.7
Lead	3	47	0.094	8.5

Town of Bourne-NMLC  
 NPDES RGP-NOI  
 120 Main St., Buzzards Bay, MA  
 RTN: 4-10373  
 4/6/06

Page 3 of 4

Nickel	10	<40	0.08	8.2
Selenium	5	<50	0.10	71
Zinc	10	<300	0.6	85.6
Iron	NA	55	0.11	1,000

Although M&D indicated certain metals to be "believed present" on the RGP- NOI Form (where the lab results exceeded the allowable minimum level), based upon the dilution factor noted herein, all metals in the Site effluent are "believed absent".

#### Treatment System Monitoring

Groundwater in the treatment system train will be monitored according to the guidelines described in the RGP to include the influent, midpoint and the effluent discharge point. The influent sample is prior to GAC #1, the midpoint sample is between GAC #1 and GAC #2, and the effluent sample is at the piping exit of GAC #2. Influent and effluent sampling and laboratory analyses for the Contaminants of Concern (CoCs) will be conducted on the first day of treatment system start-up, the third and sixth day of the first week, and once a week during the first month. Monitoring will occur monthly thereafter, as warranted. The groundwater dewatering and treatment system is anticipated to be in operation for approximately one month (1 mo).

The groundwater treatment system is designed to treat and discharge groundwater at a maximum flow rate of 200 gallons per minute (gpm). The average flow rate of the discharge is 25 gpm. A flow meter and flow totalizer (volume) will be located immediately prior to the discharge port of the treated groundwater. Flow rates will be periodically monitored throughout the discharging process with the total volume (in gallons) of discharged treated groundwater recorded at the end of each day.

#### Discharge Pathway

The treated groundwater will be discharged to a stormwater catch basin located in front of the facility on Main Street, Buzzards Bay, MA. The catch basin is connected to a series of catch basins through an 18-inch diameter drain line, which comprise the stormwater drainage system along Main Street. This stormwater drainage system discharges through an outfall pipe to the Cape Cod Canal, which is located behind the Site and the abutting Army Corp of Engineers (ACOE) property. The work zone and stormwater drainage system are depicted on Figure 2.

#### Resource Areas

Resource protection was evaluated as part of the RGP-NOI and found:

- The receiving water is within a designated Ocean Sanctuary zone.
- There are no threatened or endangered species or critical habitat in the proximity of the discharge
- There are no historic properties listed or eligible for listing on the National Register of Historic Places.

Refer to the DEP Priority Resources Map, included as Figure 4.

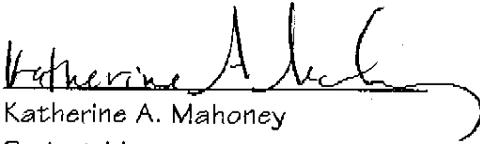
Town of Bourne-NMLC  
NPDES RGP-NOI  
120 Main St., Buzzards Bay, MA  
RTN: 4-10373  
4/6/06

Page 4 of 4

Refer to the National Pollution Discharge & Elimination System (NPDES)- Remediation General Permit (RGP), Notice of Intent (NOI) and all supporting documentation, attached.

Thank you for your consideration of our request. Please do not hesitate to contact me if you have any questions, comments or concerns.

Sincerely,



Katherine A. Mahoney  
Project Manager

encl: Attachment 1 - Notice of Intent Form  
Attachment 2 - Laboratory Analytical Reports of Influent Sample  
Attachment 3 - Figures

Figure 1	USGS Topographic Map of Bourne
Figure 2	Site Design Plan, TEC, Sheet C-2.0 and C-3.0, revised 3/28/06
Figure 3	Dewatering and Treatment System Schematic
Figure 4	DEP Priority Resources Map

cc: Thomas M. Guerino, Bourne Town Administrator  
Kathy Zagzebski, Executive Director - National Marine Life Center  
Paul Hogan, DEP/NPDES  
Simon B. Thomas, LSP, PE - Atlantic Design, Inc.  
Bruce Babcock, Tibbetts Engineering Corp. (TEC)  
Robb Wilkinson, WIL-SPEC

**B. Suggested Form for Notice of Intent (NOI) for the Remediation General Permit**

1. General site information. Please provide the following information about the site:

a) Name of facility/site: NATIONAL MARINE LIFE CENTER		Facility/site address: 120 MAIN STREET, BUZZARDS BAY, MA		
Location of facility/site: longitude: 70365 latitude: 41444	Facility SIC code(s):	Street:		
b) Name of facility/site owner: TOWN OF BOURNE		Town: BOURNE		
Email address of owner: townofbourne.com		State: MA	Zip: 02532	County: BARNSTABLE
Telephone no. of facility/site owner: (508) 759-0600		Owner is (check one): 1. Federal ___ 2. State/Tribal ___ 3. Private ___ 4. other, if so, describe: MUNICIPALITY		
Fax no. of facility/site owner: (508) 759-0620				
Address of owner (if different from site):		Street: 24 PERRY AVENUE		
Town: BUZZARDS BAY	State: MA	Zip: 02532	County: BARNSTABLE	
c) Legal name of operator: TOWN OF BOURNE	Operator telephone no: (508) 759-0600			
	Operator fax no.: (508) 759-0620	Operator email: townofbourne.com		
Operator contact name and title: THOMAS M. GUERJNO, TOWN ADMINISTRATOR				

Address of operator (if different from owner):		Street:	
Town:	State:	Zip:	County:
<p>d) Check "yes" or "no" for the following:</p> <p>1. Has a prior NPDES permit exclusion been granted for the discharge? Yes ___ No <input checked="" type="checkbox"/>, if "yes," number:</p> <p>2. Has a prior NPDES application (Form 1 &amp; 2C) ever been filed for the discharge? Yes ___ No <input checked="" type="checkbox"/>, if "yes," date and tracking #:</p> <p>3. Is the discharge a "new discharge" as defined by 40 CFR 122.2? Yes ___ No ___</p> <p>4. For sites in Massachusetts, is the discharge covered under the MA Contingency Plan (MCP) and exempt from state permitting? Yes <input checked="" type="checkbox"/> No ___</p>			
<p>e) Is site/facility subject to any State permitting or other action which is causing the generation of discharge? Yes <input checked="" type="checkbox"/> No ___</p> <p>If "yes," please list:</p> <p>1. site identification # assigned by the state of NH or MA: MADEP RTN 4-10373</p> <p>2. permit or license # assigned:</p> <p>3. state agency contact information: name, location, and telephone number: MADEP/BWSC 20 RIVERSIDE DR., LAKEVILLE, MA 02347</p>		<p>f) Is the site/facility covered by any other EPA permit, including:</p> <p>1. multi-sector storm water general permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number:</p> <p>2. phase I or II construction storm water general permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number:</p> <p>3. individual NPDES permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number:</p> <p>4. any other water quality related permit? Y ___ N <input checked="" type="checkbox"/>, if Y, number:</p>	

**2. Discharge information.** Please provide information about the discharge, (attaching additional sheets as needed) including:

<p>a) Describe the discharge activities for which the owner/applicant is seeking coverage:</p> <p style="text-align: center;">DEWATERING TO FACILITATE UTILITY TRENCHING AND INSTALLATION OF PIPING WITHIN THE CONSTRUCTION ZONE OF THE NMLC.</p>		
<p>b) Provide the following information about each discharge:</p>	<p>1) Number of discharge points:</p>	<p>2) What is the <b>maximum and average flow rate</b> of discharge (in cubic feet per second, ft<sup>3</sup>/s)? Max. flow <u>0.45</u></p> <p>Average flow <u>0.23</u> Is maximum flow a <b>design value</b>? Y ___ N <input checked="" type="checkbox"/></p> <p>For average flow, include the units and appropriate notation if this value is a design value or estimate if not available.</p> <p style="text-align: center;"><b>BASED UPON STORM DRAIN FULL CAPCITY = 200 GPM</b></p>
	<p>3) Latitude and longitude of each discharge within 100 feet: pt.1: long. <u>70365</u> lat. <u>41444</u>; pt.2: long. _____ lat. _____; pt.3: long. _____ lat. _____; pt.4: long. _____ lat. _____; pt.5: long. _____ lat. _____; pt.6: long. _____ lat. _____; pt.7: long. _____ lat. _____; pt.8: long. _____ lat. _____; etc.</p>	

4) If hydrostatic testing, total volume of the discharge (gals):	5) Is the discharge intermittent <input checked="" type="checkbox"/> or seasonal _____? Is discharge ongoing Yes _____ No <input checked="" type="checkbox"/> ?
c) Expected dates of discharge (mm/dd/yy): start <u>05/01/06</u> end <u>07/01/06</u>	
d) Please attach a line drawing or flow schematic showing water flow through the facility including: <u>SEE SITE SCHEMATIC, ATTACHED.</u> 1. sources of intake water, 2. contributing flow from the operation, 3. treatment units, and 4. discharge points and receiving waters(s).	

TIBBETTS ENGINEERING CORP.  
 SITE DESIGN PLAN  
 SHEET C 2.0 and C 3.0

3. Contaminant information. In order to complete this section, the applicant will need to take a minimum of one sample of the untreated water and have it analyzed for all of the parameters listed in Appendix III. Historical data, (i.e., data taken no more than 2 years prior to the effective date of the permit) may be used if obtained pursuant to: i. Massachusetts' regulations 310 CMR 40.0000, the Massachusetts Contingency Plan ("Chapter 21E"); ii. New Hampshire's Title 50 RSA 485-A: Water Pollution and Waste Disposal or Title 50 RSA 485-C: Groundwater Protection Act; or iii. an EPA permit exclusion letter issued pursuant to 40 CFR 122.3, provided the data was analyzed with test methods that meet the requirements of this permit. Otherwise, a new sample shall be taken and analyzed.

a) Based on the analysis of the sample(s) of the untreated influent, the applicant must check the box of the sub-categories that the potential discharge falls within.

Gasoline Only	VOC Only	Primarily Metals	Urban Fill Sites	Contaminated Sumps	Mixed Contaminants	Aquifer Testing
Fuel Oils (and Other Oils) only	VOC with Other Contaminants	Petroleum with Other Contaminants ✓	Listed Contaminated Sites	Contaminated Dredge Condensates	Hydrostatic Testing of Pipelines/Tanks	Well Development or Rehabilitation

b) Based on the analysis of the untreated influent, the applicant must indicate whether each listed chemical is **believed present** or **believed absent** in the potential discharge. Attach additional sheets as needed.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
1. Total Suspended Solids		✓	1	COMPOSITE	2540D	20			570	
2. Total Residual Chlorine	✓		1	COMPOSITE	4500	20			<0.2	
3. Total Petroleum Hydrocarbons		✓	1	COMPOSITE	1664	5			<5	
4. Cyanide	✓		1	COMPOSITE	335.3	10			<0.01	
5. Benzene		✓	1	COMPOSITE	8260B	2			0.6	
6. Toluene		✓	1	COMPOSITE	8260B	2			0.6	
7. Ethylbenzene		✓	1	COMPOSITE	8260B	2			6	
8. (m,p,o) Xylenes	✓		1	COMPOSITE	8260B	2			<0.5	
9. Total BTEX <sup>4</sup>		✓	1	COMPOSITE	8260B	5			7.7	

<sup>4</sup>BTEX = Sum of Benzene, Toluene, Ethylbenzene, total Xylenes.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
10. Ethylene Dibromide (1,2- Dibromo-methane)	✓		1	COMPOSITE	504.1	0.01			<0.02	
11. Methyl-tert-Butyl Ether (MTBE)		✓	1	COMPOSITE	8260B	5			<0.5	
12. tert-Butyl Alcohol (TBA)	✓		1	COMPOSITE	8260B	100			<20	
13. tert-Amyl Methyl Ether (TAME)	✓		1	COMPOSITE	8260B	0.5			<0.5	
14. Naphthalene		✓	1	COMPOSITE	8260B	2			13	
15. Carbon Tetrachloride	✓		1	COMPOSITE	8260B	2			<0.5	
16. 1,4 Dichlorobenzene	✓		1	COMPOSITE	8260B	2			<0.5	
17. 1,2 Dichlorobenzene	✓		1	COMPOSITE	8260B	2			<0.5	
18. 1,3 Dichlorobenzene	✓		1	COMPOSITE	8260B	2			<0.5	
19. 1,1 Dichloroethane	✓		1	COMPOSITE	8260B	2			<0.5	
20. 1,2 Dichloroethane	✓		1	COMPOSITE	8260B	2			<0.5	
21. 1,1 Dichloroethylene	✓		1	COMPOSITE	8260B	2			<0.5	
22. cis-1,2 Dichloroethylene	✓		1	COMPOSITE	8260B	2			<0.5	
23. Dichloromethane (Methylene Chloride)		✓	1	COMPOSITE	8260B	2			<2.5	
24. Tetrachloroethylene	✓		1	COMPOSITE	8260B	2			<0.5	

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily Value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
25. 1,1,1 Trichloroethane	✓		1	COMPOSITE	8260B	2			<0.5	
26. 1,1,2 Trichloroethane	✓		1	COMPOSITE	8260B	2			<0.5	
27. Trichloroethylene	✓		1	COMPOSITE	8260B	2			<0.5	
28. Vinyl Chloride	✓		1	COMPOSITE	8260B	2			<0.5	
29. Acetone	✓		1	COMPOSITE	8260B	50			<10	
30. 1,4 Dioxane	✓		1	COMPOSITE	8260B	50			<500	
31. Total Phenols	✓		1	COMPOSITE	8270C	1			<6 *	
32. Pentachlorophenol	✓		1	COMPOSITE	8270C	10			<1.1	
33. Total Phthalates <sup>5</sup> (Phthalate esters)	✓		1	COMPOSITE	8270C	5			<6 *	
34. Bis (2-Ethylhexyl) Phthalate [Di-(ethylhexyl) Phthalate]	✓		1	COMPOSITE	8270C	5			<6	
35. Total Group I Polycyclic Aromatic Hydrocarbons (PAH)	✓		1	COMPOSITE	8270C	NA			0.33	
a. Benzo(a) Anthracene	✓		1	COMPOSITE	8270C	5			<0.11	
b. Benzo(a) Pyrene	✓		1	COMPOSITE	8270C	10			<0.11	
c. Benzo(b)Fluoranthene	✓		1	COMPOSITE	8270C	10			<0.11	
d. Benzo(k) Fluoranthene	✓		1	COMPOSITE	8270C	10			<0.11	
e. Chrysene	✓			COMPOSITE	8270C	10			<0.11	

<sup>5</sup>The sum of individual phthalate compounds.

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Average daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
f. Dibenzo(a,h) anthracene	✓		3	COMPOSITE	8270C	10			0.19	
g. Indeno(1,2,3-cd) Pyrene	✓		3	COMPOSITE	8270C	10			0.14	
36. Total Group II Polycyclic Aromatic Hydrocarbons (PAH)	✓		3	COMPOSITE	8270C	NA			1.76	
h. Acenaphthene	✓		1	COMPOSITE	8270C	1			0.84	
i. Acenaphthylene	✓		1	COMPOSITE	8270C	10			<0.56	
j. Anthracene	✓		1	COMPOSITE	8270C	30			<0.56	
k. Benzo(g,h,i) Perylene	✓		1	COMPOSITE	8270C	5			0.14	
l. Fluoranthene	✓		1	COMPOSITE	8270C	3			<0.56	
m. Fluorene	✓		1	COMPOSITE	8270C	10			0.78	
n. Naphthalene-	✓		1	COMPOSITE	8270C	2			<0.56	
o. Phenanthrene	✓		1	COMPOSITE	8270C	2			<0.56	
p. Pyrene	✓		1	COMPOSITE	8270C	10			<0.56	
37. Total Polychlorinated Biphenyls (PCBs)	✓		1	COMPOSITE	8082	0.5			<0.2	
38. Antimony		✓	1	COMPOSITE	7041	5			<60	
39. Arsenic		✓	1	COMPOSITE	6010B	5			<10	
40. Cadmium	✓		1	COMPOSITE	6010B	5			<5	
41. Chromium III		✓	1	COMPOSITE	6010B	10			20	
42. Chromium VI	✓		1	COMPOSITE	3500	10			<30	

PARAMETER	Believe Absent	Believe Present	# of Samples (1 minimum)	Type of Sample (e.g., grab)	Analytical Method Used (method #)	Minimum Level (ML) of Test Method	Maximum daily value		Avg. daily value	
							concentration (ug/l)	mass (kg)	concentration (ug/l)	mass (kg)
43. Copper		✓	1	COMPOSITE	6010B	5			34	
44. Lead		✓	1	COMPOSITE	7421	3			47	
45. Mercury	✓		1	COMPOSITE	7470	0.2			<0.2	
46. Nickel		✓	1	COMPOSITE	6010B	10			<40	
47. Selenium		✓	1	COMPOSITE	7740	5			<50	
48. Silver	✓		3	COMPOSITE	6010B	10			<7	
49. Zinc		✓	1	COMPOSITE	6010B	10			<300	
50. Iron		✓	1	COMPOSITE	6010B	NA			55	
Other (describe):		✓	1	COMPOSITE	8720C	NA			3.3	

c) For discharges where **metals** are believed present, please fill out the following:

<p><i>Step 1:</i> Do any of the metals in the influent have a <b>reasonable potential</b> to exceed the effluent limits in Appendix III (i.e., the limits set at zero to five dilutions)? Y <input checked="" type="checkbox"/> N <input type="checkbox"/></p>	<p>If yes, which metals? ANTIMONY, ARSENIC, CHROMIUM III, COPPER, LEAD, NICKEL, SELENIUM, ZINC, IRON</p>
<p><i>Step 2:</i> For any metals which have <b>reasonable potential</b> to exceed the <b>Appendix III</b> limits, calculate the <b>dilution factor (DF)</b> using the formula in Part I.A.3.c) (step 2) of the NOI instructions or as determined by the State prior to the submission of this NOI. What is the dilution factor for applicable metals? Metals: _____ DF: <u>500</u></p>	<p>Look up the limit calculated at the corresponding dilution factor in <b>Appendix IV</b>. Do any of the metals in the <b>influent</b> have the potential to exceed the corresponding <b>effluent</b> limits in Appendix IV (i.e., is the influent concentration above the limit set at the calculated dilution factor)? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> If "Yes," list which metals:</p>

**4. Treatment system information.** Please describe the treatment system using separate sheets as necessary, including:

a) A description of the treatment system, including a schematic of the proposed or existing treatment system:

**PUMP -- FRAC TANK -- BAG FILTER -- ACTIVATED CARBON UNIT #1 -- ACTIVATED CARBON UNIT #2 -- FLOW CONTROLS AND GAUGE -- DISCHARGE LINE TO STORM DRAIN**

b) Identify each applicable treatment unit (check all that apply):	Frac. tank ✓	Air stripper	Oil/water separator	Equalization tanks	Bag filter ✓	GAC filter ✓
	Chlorination	Dechlorination	Other (please describe):			

c) Proposed average and maximum flow rates (gallons per minute) for the discharge and the design flow rate(s) (gallons per minute) of the treatment system:  
 Average flow rate of discharge 100 Maximum flow rate of treatment system 200 Design flow rate of treatment system 200

d) A description of chemical additives being used or planned to be used (attach MSDS sheets):

NA

**5. Receiving surface water(s).** Please provide information about the receiving water(s), using separate sheets as necessary:

a) Identify the discharge pathway:	Direct _____	Within facility__	Storm drain <input checked="" type="checkbox"/>	River/brook _____	Wetlands _____	Other (describe):
------------------------------------	--------------	-------------------	---	-------------------	----------------	-------------------

b) Provide a narrative description of the discharge pathway, including the name(s) of the receiving waters:

**THE DISCHARGE WILL BE DIRECTED TO THE STORM DRAIN ON THE SOUTH SIDE OF MAIN STREET, IN FRONT OF THE FACILITY. THIS STORM DRAIN IS INTERCONNECTED WITH OTHER STORM DRAINS ALONG MAIN STREET, WHICH ULTIMATELY DISCHARGE TO THE CAPE COD CANAL THROUGH AN OUTFALL PIPE LOCATED APPROXIMATELY 100 FEET DOWNGRADIENT OF THE SITE.**

c) Attach a detailed map(s) indicating the site location and location of the outfall to the receiving water:  
 1. For multiple discharges, number the discharges sequentially.  
 2. For indirect dischargers, indicate the location of the discharge to the indirect conveyance and the discharge to surface water  
 The map should also include the location and distance to the nearest sanitary sewer as well as the locus of nearby sensitive receptors (based on USGS topographical mapping), such as surface waters, drinking water supplies, and wetland areas.

d) Provide the state water quality classification of the receiving water SB

e) Provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water NA cfs  
 Please attach any calculation sheets used to support stream flow and dilution calculations.

f) Is the receiving water a listed 303(d) water quality impaired or limited water? Yes \_\_\_ No  If yes, for which pollutant(s)?

Is there a TMDL? Yes \_\_\_ No \_\_\_ If yes, for which pollutant(s)?

**6. Results of Consultation with Federal Services:** Please provide the following information according to requirements of Part 1.B.4 and Appendices II and VII.

a) Are any listed threatened or endangered species, or designated critical habitat, in proximity to the discharge? Yes \_\_\_ No   
 Has any consultation with the federal services been completed? No  or is consultation underway? Yes \_\_\_ No   
 What were the results of the consultation with the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service (check one):  
 a "no jeopardy" opinion? \_\_\_ or written concurrence \_\_\_ on a finding that the discharges are not likely to adversely affect any endangered species or critical habitat?

b) Are any historic properties listed or eligible for listing on the National Register of Historic Places located on the facility or site or in proximity to the discharge?  
 Yes \_\_\_ No  Have any state or tribal historic preservation officer been consulted in this determination (Massachusetts only)? Yes \_\_\_ No

**7. Supplemental information :**

Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit.

COVER LETTER WITH METALS DILUTION RESULTS.

NPDES INFLUENT LABORATORY ANALYTICAL REPORTS, ATTACHED.

PROPERTY LOCUS AND SITE SCHEMATIC, ATTACHED. THE SITE SCHEMATIC SHOWS THE CONSTRUCTION DEWATERING ZONES, THE TREATMENT UNIT STAGING AREA, THE DISCHARGE POINT, THE OUTFALL PIPE AND THE RECEIVING WATER BODY.

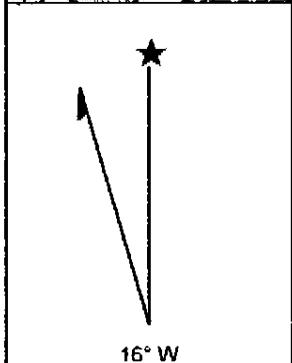
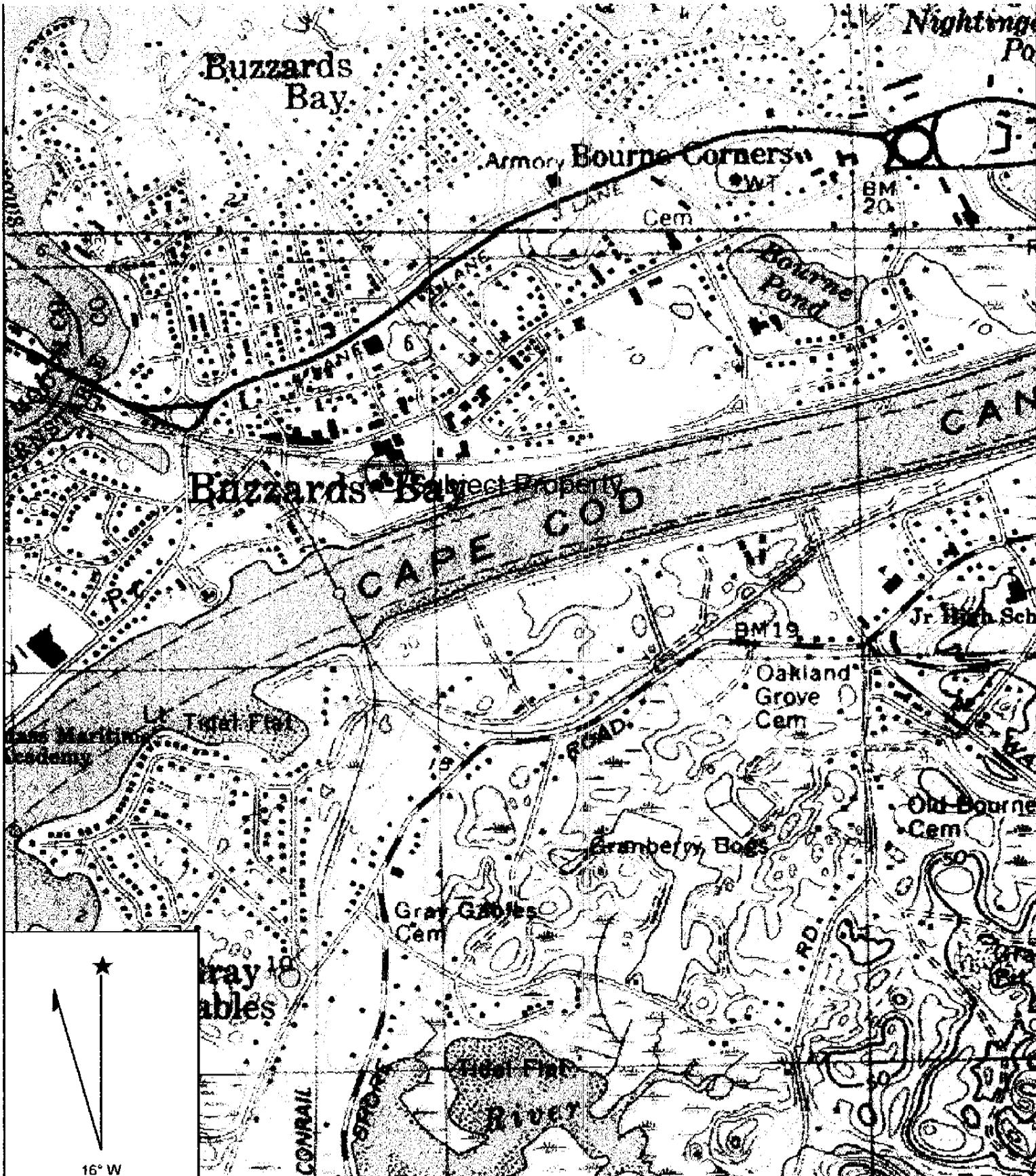
TREATMENT SYSTEM FLOW SCHEMATIC, ATTACHED.

DEP PRIORITY RESOURCES MAP, ATTACHED.

**8. Signature Requirements:** The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22, including the following certification:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Facility/Site Name:	
Operator signature:	
Title:	Town Administrator
Date:	3-24-06



Name: POCASSET  
 Date: 4/7/2006  
 Scale: 1 inch equals 1000 feet

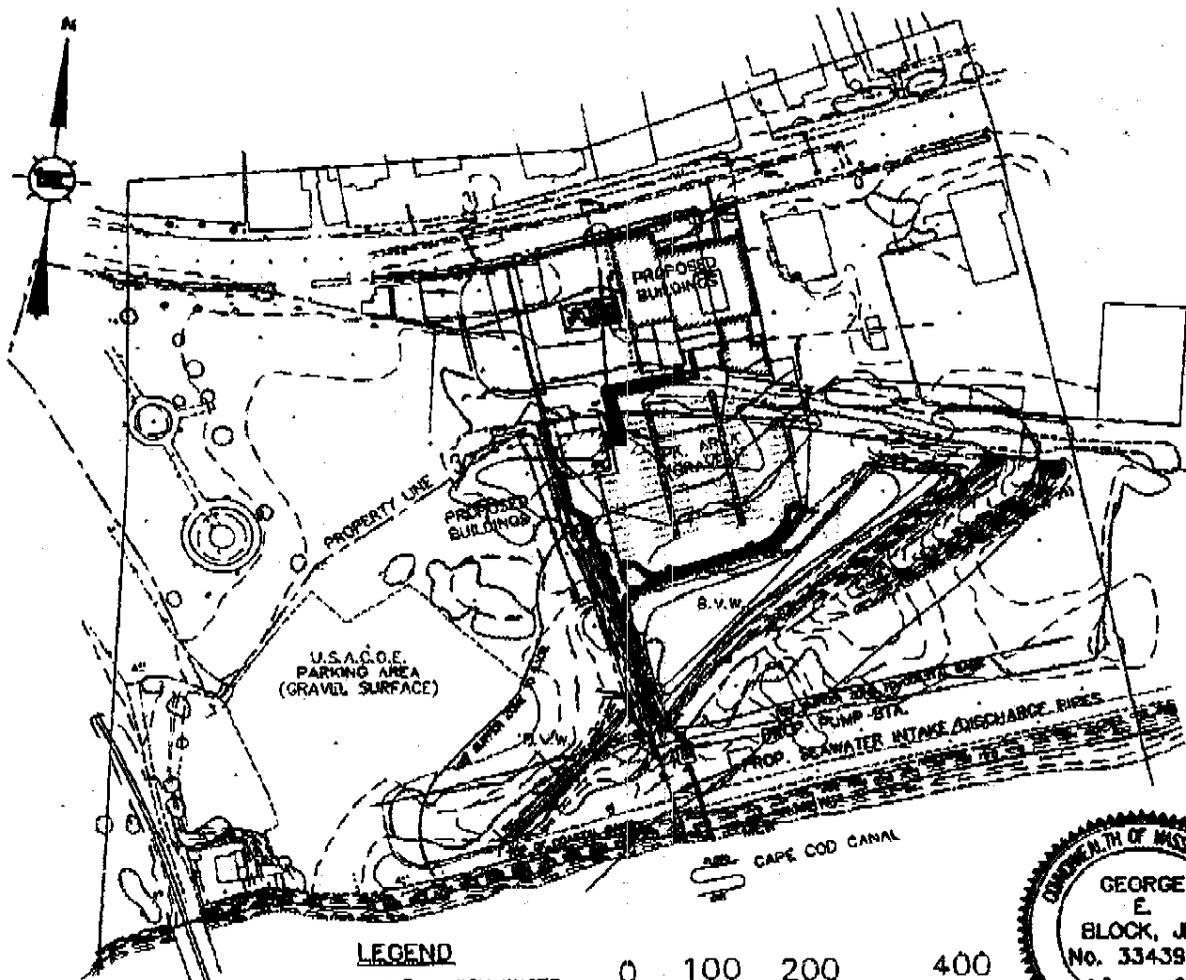
Location: 041° 44' 31.4" N 070° 36' 32.7" W  
 Caption: PROPERTY LOCUS

**NOTES:**

- 1.) EXISTING CONDITIONS FROM PLAN TITLED "EXISTING CONDITIONS, 120 MAIN ST., BOURNE, MA, NATIONAL MARINE LIFE CENTER" DATED JANUARY 3, 2005 BY TIBBETTS ENGINEERING CORP.
- 2.) ELEVATIONS SHOWN BASED ON NGVD 88
- 3.) LOT 15 LOCATED IN F.E.M.A. FLOOD ZONE A9 EL.14 (NGVD 29)

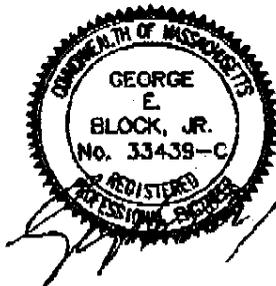


LOCUS MAP



**LEGEND**

- MEAN HIGH WATER
- - - MEAN LOW WATER
- - - TOP OF COASTAL BANK
- - - FLOOD ZONES



TIBBETTS ENGINEERING CORP. TAUNTON, MA.  
SHEET 1 OF 2 JN 10578.071

PLAN TO ACCOMPANY PETITION OF  
 NATIONAL MARINE LIFE CENTER  
 TO INSTALL SEAWATER INTAKE AND  
 DISCHARGE PIPELINES IN THE  
 CAPE COD CANAL  
 TOWN OF BOURNE  
 COUNTY OF BARSTABLE, MA.

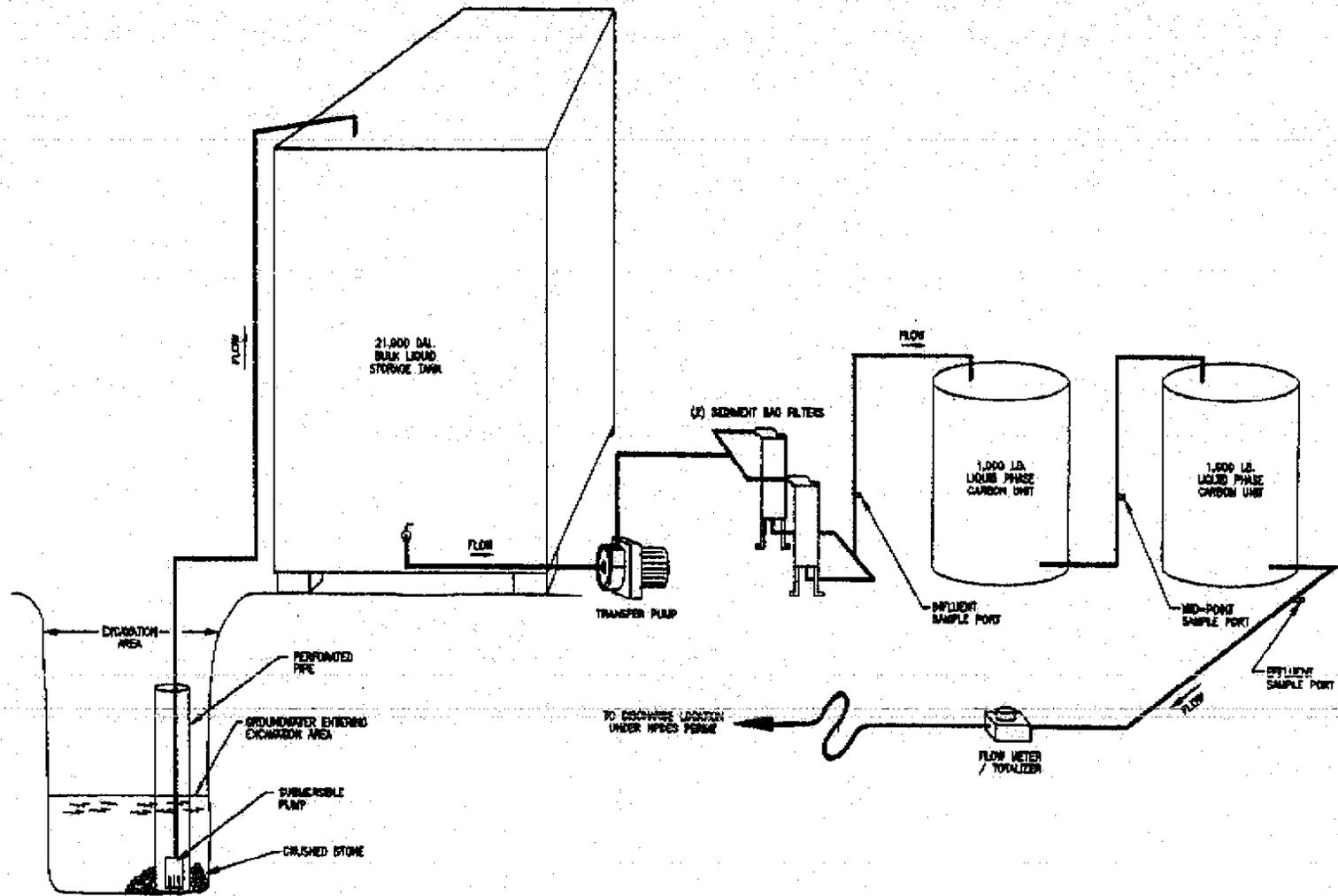


FIGURE 3

GROUNDWATER - DEWATERING TREATMENT SYSTEM SCHEMATIC

National Marine Life Center/Town of Bourne  
(Former Mobil Bulk Terminal)  
110-120 Main Street  
Buzzards Bay, Massachusetts 02532

RTN: 4-10373 and 4-1348



MAHONEY & DOUGLAS, LTD.  
P. O. Box 473  
Falmouth, Massachusetts 02541