RDMS DocID 108413

**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION**

Interim Final 2/5/99

**RCRA Corrective Action**
**Environmental Indicator (EI) RCRIS code (CA750)**

**Migration of Contaminated Groundwater Under Control**

**Facility Name: Enpro Services of Maine**
**Facility Address: 106 Main Street, South Portland, Maine 04106**
**Facility EPA ID #: MED 019051069**

1. Has **all** available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   X If yes - check here and continue with #2 below.

   _____ If no - re-evaluate existing data, or

   _____ if data are not available, skip to #8 and enter"IN" (more information needed) status code.

## BACKGROUND

### Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

### Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

### Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated

RCRA RECORDS CENTER
FACILITY ENPRO
I.D. NO. MED019051069
FILE LOC. R-13
OTHER #108413

Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

***Duration / Applicability of EI Determinations***

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Is **groundwater** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

__X__ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

_____ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s): ): Quarterly sampling results dated June 10, 2009 indicate the following contaminants MTBE 12 ppb, Ethylbenzene 18 ppb, O-Xylene 3 ppb, styrene 3 ppb, Bromobenzene 2, 2- Chlorotouluene 1 ppb, Sec- Butylbenzene 2 ppb, 1, 2, 4-trimethylbenzene 74 ppb, Naphthalene 80 ppb, and DRO (diesel range organics C-10-C-28) at 590 to 2200 ppb (See Figure L-2 for monitoring well locations and attached photo showing the ENPRO facility location). Maine uses the lower value of the EPA MCL or the State of Maine Maximum Exposure Guidelines (MEG's) for ground water. All ground water in Maine must meet the MEG's to be considered remediated. Quarterly ground water monitoring indicates contaminant levels of DRO and VOC's staying within historic levels indicating no new impacts from the facility operation. (See Table 2).

Ground water exceeds the Maine Exposure Guidelines for potable water at this site for Diesel Range Organics (C-10-C-28) and Ethylbenzene (See table 2). However the entire City of South Portland is supplied water from the Portland Water District which receives its supply from Sebago Lake approximately 13 miles north west of the facility. There are no public or private ground water well in the area.

Footnotes:

[1]"Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

X If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) - skip to #8 and enter "NO" status code, after providing an explanation.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s): The site has been conducting quarterly ground water sampling events since the early 1990's although these events consistently indicate ground water contamination above the State of Maine MEG's the levels are staying within historic levels. Recent file reviews and site visits indicate that the facility has not suffered any recent discharges that would further impact ground water or soils at the site.

Draft RFA May 2009, Limited subsurface investigation February 2002, Annual and Quarterly ground water reports February 2001.

Footnotes:

[2] "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

_____ If yes - continue after identifying potentially affected surface water bodies.

X If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s): The Fore River is the only surface water body in the vicinity of the facility. It located approximately ¼ mile north of the facility. The area between ENPRO and the Fore River is occupied by marine oil terminals which have impacted the area through years of oil handling. (See photo and zoning map).

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgment/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

_____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):_____
_____
_____

Footnotes:

[3] As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR
2) providing or referencing an interim-assessment,[5] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):_____
_____
_____
_____

Footnotes:

[4] Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

[5] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

X If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

_____ If no - enter "NO" status code in #8.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s): ENPRO is required to continue a quarterly ground water sampling event as part of its Part B TSD Permit. The facility will be monitoring at a minimum the following ground water monitoring wells ENPRO MW-2, MW-4, MW- 3, MW – 5 and MW- 9 as part of their permit conditions for Diesel Range Organics (DRO), Volatile Organic Compounds (VOCs) and lead (see Figure L-2). ENPRO has proposed the installation of additional ground water monitoring well(s) down gradient of the facility as part of their license renewal application dated November 20, 2008. The proposed well locations will be approved by a Department geologist prior to installation to ensure they are properly located to intercept the down gradient flow of ground water.

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

**X** YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the ENPRO Services of Maine Inc. facility, EPA ID #MED 019051069 located at 106 Main St. S. Portland, Maine 04106. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

_____ NO - Unacceptable migration of contaminated groundwater is observed or expected.

_____ IN - More information is needed to make a determination.

Completed by (signature) Richard Kaselis Date 9/18/09
(print) RICHARD KASELIS
(title) EST II

Supervisor (signature) Stacy A. Ladner Date 9/18/09
(print) Stacy A. Ladner
(title) Unit Manager
~~(EPA Region or~~ State) Maine DEP

Locations where References may be found:
Bureau of Remediation and Waste Management File Room, Ray Building Augusta, Maine

Contact telephone and e-mail numbers

Reviewed and Approved
3/16/10
Chief RCRA Corrective Action
USEPA - Region 1

(name) Richard Kaselis
(phone #) 207-287-6113
(e-mail) richard.m.kaselis@maine.gov

ENPRO

**Table 2**
**Quarterly Groundwater Sampling Analytical Results**
**ENPRO Services of Maine, Inc.**
**June 10, 2009**

| PARAMETERS | Concentration (ug/L) ENPRO MW-2 | ENPRO MW-4 | ECC MW-3 | ENPRO MW-5 | ENPRO MW-9 | MEG | MCL |
|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane | < 5 | < 5 | < 5 | < 5 | < 5 | | |
| Chloromethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Vinyl chloride | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Bromomethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Chloroethane | < 5 | < 5 | < 5 | < 5 | < 5 | | |
| Trichlorofluoromethane | < 5 | < 5 | < 5 | < 5 | < 5 | | |
| Diethyl Ether | < 5 | < 5 | < 5 | < 5 | < 5 | | |
| Acetone | < 10 | < 10 | < 10 | <10 | <10 | | |
| 1,1-Dichloroethene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| tert-Butyl Alcohol (TBA) | < 30 | < 30 | < 30 | < 30 | < 30 | | |
| Methylene chloride | < 5 | < 5 | < 5 | < 5 | < 5 | | |
| Carbon disulfide | < 5 | < 5 | < 5 | < 5 | < 5 | | |
| Methyl-t-butyl ether(MTBE) | < 5 | < 5 | < 5 | 12 | < 5 | 35 | 35 |
| Ethyl-t-butyl ether(ETBE) | < 5 | < 5 | < 5 | < 5 | < 5 | | |
| Isopropyl ether (DIPE) | < 5 | < 5 | < 5 | < 5 | < 5 | | |
| tert-amyl methyl ether(TAME) | < 5 | <5 | < 5 | <5 | < 5 | | |
| trans-1,2-Dichloroethene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,1-Dichloroethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 2,2-Dichloropropane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| cis-1,2-Dichloroethene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 2-Butanone(MEK) | < 10 | < 10 | < 10 | < 10 | < 10 | | |
| Bromochloromethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Tetrahydrofuran(THF) | < 10 | < 10 | < 10 | < 10 | < 10 | | |
| Chloroform | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,1,1-Trichloroethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Carbon tetrachloride | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,1-Dichloropropene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Benzene | < 1 | <1 | < 1 | < 1 | < 1 | | |
| 1,2-Dichloroethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Trichloroethene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,2-Dichloropropane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Dibromomethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Bromodichloromethane | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | | |
| 4-Methyl-2-pentanone(MIBK) | < 10 | < 10 | < 10 | < 10 | < 10 | | |
| cis-1,3-Dichloropropene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Toluene | < 1 | < 1 | < 1 | < 1 | < 1 | | |

* MEG STATE OF MAINE EXPOSURE GUIDELINE
MCL EPA MAXIMUM CONTAINMENT LEVEL



Summary Table Second Quart 2009

**ENPRO Services, Inc.**

31 Waldron Way, Portland, ME 04103
(207) 878-3031 - FAX (207) 878-3043

12 Mulliken Way, Newburyport, MA 01950
(978) 465-1595 - FAX (978) 465-2050

**www.enpro.com**

Table 2
Quarterly Groundwater Sampling Analytical Results
ENPRO Services of Maine, Inc.
*June 10, 2009*

| PARAMETERS | Concentration (ug/L) ENPRO MW-2 | ENPRO MW-4 | ECC MW-3 | ENPRO MW-5 | ENPRO MW-9 | MEG | MCL |
|---|---|---|---|---|---|---|---|
| trans-1,3-Dichloropropene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,1,2-Trichloroethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 2-Hexanone | < 10 | < 10 | < 10 | < 10 | < 10 | | |
| Tetrachloroethene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,3-Dichloropropane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Dibromochloromethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,2-Dibromoethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Chlorobenzene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,1,1,2-Tetrachloroethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| Ethylbenzene | < 1 | < 1 | < 1 | < 1 | **18** | 13 | |
| mp-Xylene | < 1 | < 1 | < 1 | < 1 | **7** | 1400 | 10,000 |
| o-Xylene | < 1 | < 1 | < 1 | < 1 | **3** | 1400 | 10,000 |
| Styrene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| Bromoform | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| iso-Propylbenzene | < 1 | < 1 | < 1 | < 1 | **2** | | |
| Bromobenzene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,1,2,2-Tetrachloroethane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,2,3-Trichloropropane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| n-Propylbenzene | < 1 | < 1 | < 1 | < 1 | **1** | | |
| 2-Chlorotoluene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 4-Chlorotoluene | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,3,5-Trimethylbenzene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| tert-Butylbenzene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| 1,2,4-Trimethylbenzene | < 1 | < 1 | < 1 | < 1 | **74** | | |
| sec-Butylbenzene | < 1 | < 1 | < 1 | **2** | < 1 | | |
| 1,3-Dichlorobenzene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| p-isopropyltoluene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| 1,4-Dichlorobenzene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| 1,2-Dichlorobenzene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| n-Butylbenzene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| 1,2-Dibromo-3-chloropropane | < 2 | < 2 | < 2 | < 2 | < 2 | | |
| 1,2,4-Trichlorobenzene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| Hexachlorobutadiene | < 0.5 | < 0.5 | < 0.5 | < 0.5 | < 0.5 | | |
| Naphthalene | < 5 | < 5 | < 5 | < 5 | **80** | 140 | 100 |
| 1,2,3-Trichlorobenzene | < 1 | < 1 | < 1 | < 1 | < 1 | | |
| DRO(Diesel Range Organics C10-C28) | <50 | **590** | **270** | **1500** | **2200** | 50 | |
| Total Lead (mg/L) | **0.003** | **0.023** | **0.001** | **0.001** | **0.001** | | |



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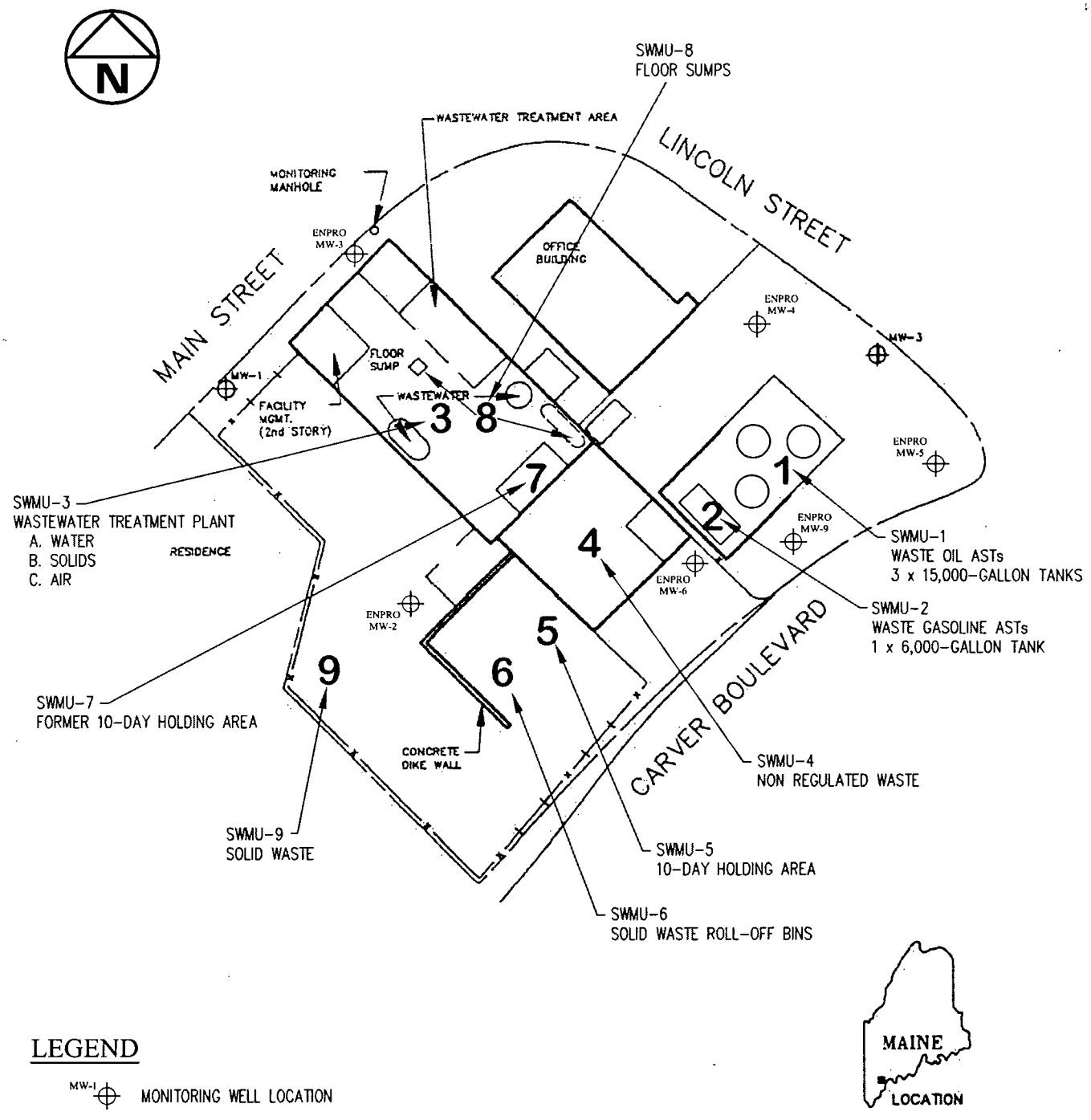
(207) 878-3031 - FAX (207) 878-3043

12 Mulliken Way, Newburyport, MA 01950
(978) 465-1595 - FAX (978) 465-2050

**www.enpro.com**




## LEGEND

MW-1 ⊕ MONITORING WELL LOCATION

PROPERTY LINES

SOURCE:
FIGURE L-2 IS BASED ON DRAWING TAKEN FROM FINAL PRELIMINARY ASSESSMENT PLUS REPORT JETLINE SERVICES, INC. SOUTH PORTLAND, ME. (JULY 1992)

# ENPRO SERVICES OF MAINE

**106 MAIN STREET SOUTH PORTLAND, MAINE**

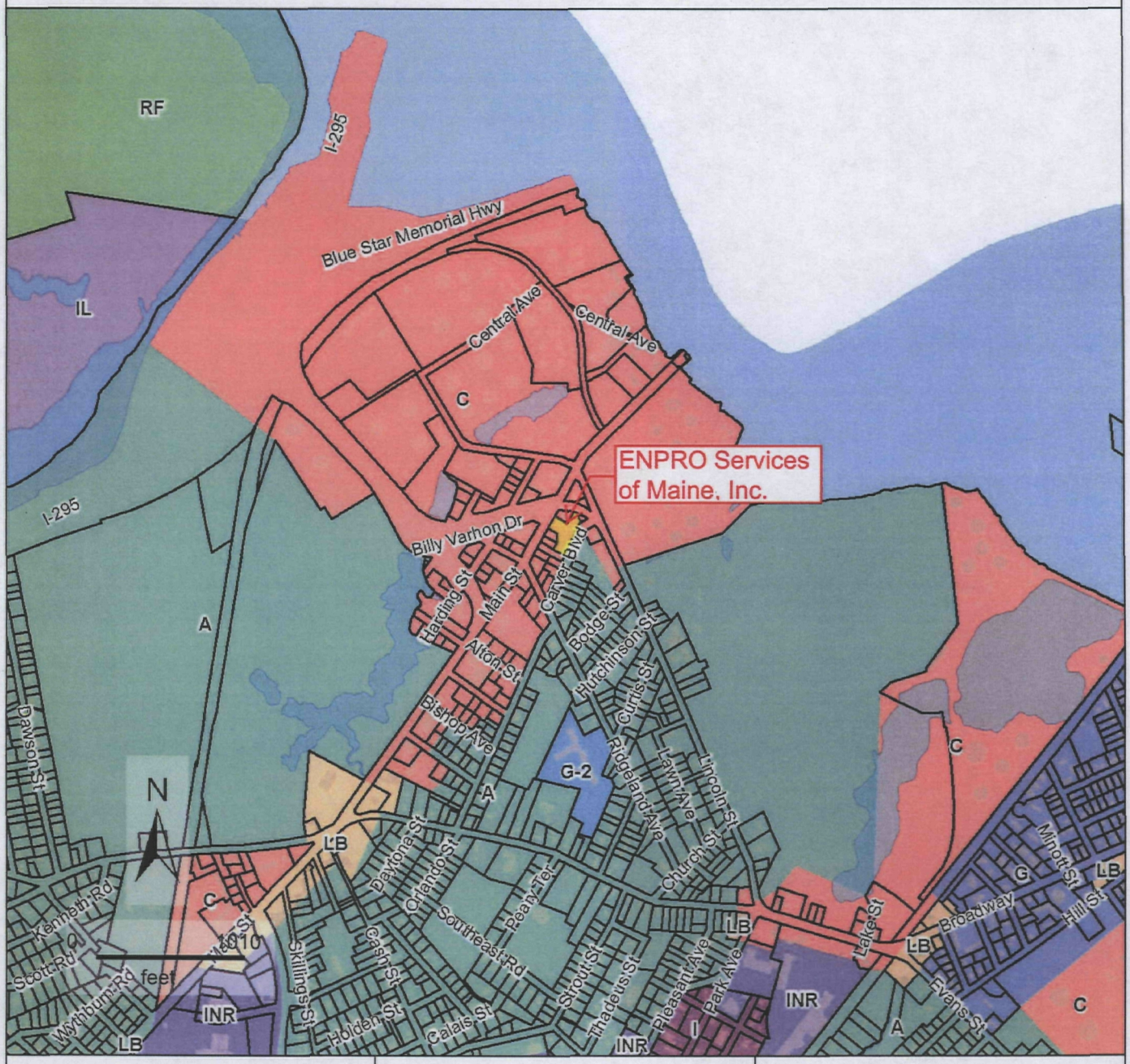
Mabbett & Associates

SOLID WASTE MANAGEMENT UNIT MAP

DWG. NO. L-2

| DRAWN | APPROVED | SCALE | PROJ. NO. |
|---|---|---|---|
| DJA | KBS | NOT TO SCALE | 7051012.003 |

# Zoning Map - South Portland, Maine

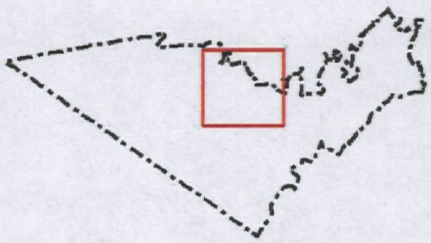



| | |
|---|---|
| Property ID | 032*0000*036B |
| Address | 106 MAIN ST |
| Owner | DAC II, LLC |

City of South Portland

Map For Reference Only
Not a Legal Document

The City of South Portland makes no claims and no warranties, concerning the validity, expressed or implied, of the accuracy of the GIS data presented on this map.



Carver Blvd
ENPRO FACILITY
Main St
Main St Terrace
Gately St
Bodge St
1
Image © 2009 Maine GeoLibrary
© 2009 Tele Atlas
43°38'08.47" N 70°17'09.98" W
Eye alt