



RDMS DocID

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DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

**RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)****Current Human Exposures Under Control**

Facility Name: BASF EASTPORT FACILITY
Facility Address: 30 STANIELS ROAD, EASTPORT, MAINE 04631
Facility EPA ID #: MED 001 099 308

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (eg., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

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

If no - re-evaluate existing data, or

If data are not available skip to #6 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 nonhuman (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "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 "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

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).

RCRA RECORDS CENTER
 FACILITY BASF
 I.D. NO. MED 001099308
 FILE LOC. R-13
 OTHER #109601

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
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2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**¹ above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater	<u>X</u>	<u> </u>	<u> </u>	General boundaries of plume(s) identified. Contaminants listed below:
Air (indoors) ²	<u>X</u>	<u> </u>	<u> </u>	Only two habitable structures remain on this site. Both have had soil vapor analysis (subslab) completed. Several contaminants of concern have been found. See summary below:
Surface Soil (e.g., <2 ft)	<u>X</u>	<u> </u>	<u> </u>	Contamination present in some surficial soils. Summary presented below:
Surface Water	<u> </u>	<u>X</u>	<u> </u>	Impact to surface water is not expected. The only surface water on or adjacent to this site is Broad Cove of Cobscook Bay. This is a salt water bay of very large size with strong tidal currents and tidal ranges of up to 25 feet or more. These factors would result in such high mixing rates that effects of contaminants from this site would be indistinguishable. No surface water sampling was done.
Sediment	<u>X</u>	<u> </u>	<u> </u>	Contamination present in some of the sediments in the intertidal zone adjacent to this site. Summary presented below:
Subsurf. Soil (e.g., >2 ft)	<u>X</u>	<u> </u>	<u> </u>	Contamination present in some subsurface soils. Summary presented below:

Air (outdoors)

 X

Surface soil contamination consists primarily of non-volatile compounds and lower volatile fractions of petroleum products. Additionally, portions of the site with significant surface contamination is open to free air movement with no more than low vegetation and no low confined areas to trap heavy vapors. No outdoor air samples have been taken.

_____ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

 X If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

_____ If unknown (for any media) - skip to #6 and enter "IN" status code.

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 appropriately protective riskbased "levels" (for the media, that identify risks within the acceptable risk range).

² Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

Rationale and Reference(s):

RELEVANT DOCUMENTS

LFR Environmental Management & Consulting Engineering

Report Dated: June 12, 2008

Phase I Subsurface Investigation Report

BASF Eastport Facility

30 Staniels Road, Eastport, Maine

LFR Environmental Management & Consulting Engineering

Report Dated: January 23, 2009

Phase II Technical Memorandum # 1

BASF Eastport Facility

LFR Environmental Management & Consulting Engineering

Report Dated: February 20, 2009

Phase II Technical Memorandum # 2

BASF Eastport Facility

LFR Environmental Management & Consulting Engineering

Report Dated: May 29, 2009

Phase II Technical Memorandum # 3

BASF Catalysts LLC - Eastport Maine

LFR Environmental Management & Consulting Engineering

Report Dated: June 15, 2009

Phase II Technical Memorandum # 4

BASF Catalysts LLC - Eastport Maine

LFR Environmental Management & Consulting Engineering

Report Dated: July 7, 2009

Phase II Technical Memorandum # 5

BASF Eastport Facility

Declaration of Restrictive Covenant

Declared by Mearl LLC on May 12, 2004

Recorded in **Washington County Registry of Deeds at Book 2878, Page 169**

SUMMARY

This property has been the site of a manufacturing facility at least as far back as the late 1940s. Over that period of time activities have included the production of fish meal, production of protein based fire retardant foam and production of pearl essence. This facility was owned and operated for many years by the Mearl Corporation until about 1995 when it was acquired by Englehard Corporation. Subsequent to the acquisition the facility operated as Mearl LLC. Englehard was acquired by BASF Corporation in 2006. The facility is now owned by BASF Catalysts LLC. Pearl essence has been the sole product manufactured at this facility in recent years and production of this product ceased in 2007.

The production of pearl essence (1950's through 1995) involved extraction and refining of guanine, a purine base present in herring scales, using significant quantities of chemical solvents such as naphtha and ethylene dichloride (1,2 Dichloroethane). These solvents were reported to be used in volumes of thousands of gallons a year and staged on Site in above-ground tanks. Other solvents such as isopropanol and butyl-acetate were used in lower volume. In 1995, the extraction process was switched to an aqueous based extraction which significantly reduced volatile organic compound storage and usage (to approximately 2,200 gallons of naphtha per year) at the Site.

GROUNDWATER

As seen on the attached site diagram, a large part of this site consists of a peninsula and the majority of the industrial activities took place on that peninsula. Parts of the peninsula are natural formations and parts are built up of earthen materials bound by wooden cribwork and concrete retaining walls. The natural formations in particular often have very shallow overburden and in a number of locations, exposed bedrock. While contaminated groundwater was found in some overburden wells, the availability of overburden groundwater was found to be very inconsistent and because of the discontinuous nature of the overburden no contaminant plume or flow pattern could be discerned. It appears reasonable to assume that all overburden groundwater will have a relatively direct flow path to the Broad Cove.

Because of the limited presence and usefulness of the overburden groundwater as discussed above, a greater emphasis was given to the investigation of the bedrock groundwater. A number of bedrock wells have been advanced on this site and contaminants have been found in a number of these wells. Contaminants of concern have been found in several bedrock wells. Tables below show the highest levels for contaminants exceeding the appropriate standard.

Overburden Wells Contaminant	GW Standard (ug/L) MCL/MEG	Highest Concentration in GW (ug/L)	Location
Ethyl Benzene	700/70	266	MW-10
1,2-Dichloroethane	5/4	8	MW-2
Arsenic	50/10	19	MW-2

Bedrock Wells Contaminant	GW Standard (ug/L) MCL/MEG	Highest Concentration in GW (ug/L)	Location
1,4 Dichlorobenzene	75/21	34	MW-14B
1,2-Dichlorobenzene	600/63	79	MW-14B
1,2-Dichloroethane	5/4	18000	MW-18B
Ethylbenzene	700/70	710	MW-16B
Xylenes	10000/1400	6400	MW-16B
Trichloroethane	5/32	443	MW-11B
Carbon tetrachloride	5/3	20	MW-11B
Arsenic	50/10	90	MW-18B
Lead	15/10	13	MW-19B
Petroleum Hydrocarbon Fractions			
C5-C8 Aliphatics	300*	6290	MW-18B
C9-C12 Aliphatics	700*	3160	MW-16B
C9-C10 Aromatics	200*	275	MW-14B
C11-C22 Aromatics	200*	1360	MW-16B

* Draft Maine drinking water guidelines for petroleum fractions.

This site currently has an environmental covenant (see “Declaration of Restrictive Covenant” above) which prohibits the extraction of groundwater for consumption and prohibits any groundwater removal or alteration without prior written permission from the Maine Department of Environmental Protection. There are no groundwater wells currently located on the property (other than for investigative purposes) and the property is serviced by municipal water.

INDOOR AIR

There are only two buildings remaining on this site that are suitable for human occupancy. Building #15 which has been the facility office building for many years continues to be used for that purpose by a small caretaker staff and is also used as a base for the staff involved with the ongoing investigation and remediation efforts. Building #28, a former processing building, is currently leased to the Eastport Port Authority who uses it for warehousing purposes along with periodic maintenance activities.

Both buildings have been examined for subslab soil vapors with samples collected from three different locations within each building. Building #15 is a single story building with a full basement and samples were taken from beneath the basement slab. Building #28 is also a single story, slab-on-grade construction and samples were taken directly through the slab floor. All samples showed a number of contaminants but in each building only one sample had one contaminant exceeding levels of concern (see table below). Other contaminants present were well below screening levels.

Subslab Soil Vapor Contaminant	Soil Vapor Screening Values* (ug/M ³)	Concentration in Soil Vapors (ug/M ³)	Location
1,2-Dichloroethane	4.5*	2.43	Bldg #28 SG#1
1,2-Dichloroethane	4.5*	4.38	Bldg #28 SG#2
1,2-Dichloroethane	4.5*	6.61	Bldg #28 SG#3
C9-C12 Aliphatics	2100*	278	Bldg #15 SG#1
C9-C12 Aliphatics	2100*	1100	Bldg #15 SG#2
C9-C12 Aliphatics	2100*	2490	Bldg #15 SG#3

* Draft Maine Vapor Intrusion Guidance – Soil Vapor Screening Values (Indoor Air Target x 50). Calculated using IAT for residential scenario with multiple contaminants.

SURFACE SOILS

Extensive analyses have been completed on both surface and subsurface soils at this site. Because of the difficulty of evaluating so many samples the site has been divided into six major “Areas of Concern” based generally on the types and level of industrial activities that took place in those locations. Several portions of the site with no indications of industrial activity and no evidence of contamination have been excluded from the areas of concern. The table below shows the highest level of contaminants that are near or exceed the remedial action guidelines for commercial/industrial workers with multiple contaminant exposures. The table also shows the guidelines that would be applicable if the site were to be considered for residential use. The site is currently commercial/industrial use and residential use is not expected.

Surface Soils Contaminant	Remedial action Guideline(mg/kg) Residential/Commercial worker	Highest Concentration (mg/kg)	Location (Area of Concern)
Lead	170/561	150	AOC-1
Arsenic	16 (background)	23	AOC-2
Arsenic	16 (background)	19	AOC-6
Arsenic	16 (background)	17	AOC-1
Petroleum Hydrocarbon Fractions			
C11-C22 Aromatics	730/4400	1970	AOC-3
Benzo a pyrene	0.026/0.35	30.9	AOC-3
Benzo a pyrene	0.026/0.35	18.2	AOC-1
Benzo a pyrene	0.026/0.35	1.46	AOC-2
PCBs (Total)	0.49/1.2	1.9	AOC-2

SEDIMENTS

As discussed in other sections, the major industrial activities on this site took place on a peninsula with the waters of Broad Cove on three sides. With obvious concerns for impacts to the marine environment, sediment samples were taken from a number of locations in the intertidal zone. Sampling locations were selected with a consideration for historical outfalls as well as locations with evidence of groundwater seeps or surface water runoff. Sample locations with the highest exceedances are shown below:

Marine Sediments Contaminant	Remedial action Guideline(mg/kg) Residential*	Highest Concentration (mg/kg)	Location (Area of Concern)
Lead	170	12,000	N3-E-SS1-B
Arsenic	16 (background)	33	N3-B-SS1-C
PCBs (Total)	0.49	14.9	N2-C-SS1-C

* Soil RAGS were used to estimate human exposure considerations for sediments. Residential exposure scenario was used as the most conservative.

SUBSURFACE SOILS

As discussed in the narrative on surficial soils, a large number of subsurface soil samples were analyzed and the results will be presented as areas of concern. The table below shows contaminant level near or exceeding the remedial guidelines:

Surface Soils Contaminant	Remedial action Guideline(mg/kg) Construction worker	Highest Concentration (mg/kg)	Location (Area of Concern)
Lead	954	381	AOC-1
Arsenic	16 (background)	35	AOC-2
Arsenic	16 (background)	23.7	AOC-6
Arsenic	16 (background)	20.4	AOC-5
Arsenic	16 (background)	17.9	AOC-4
Arsenic	16 (background)	16.2	AOC-1
Arsenic	16 (background)	15.3	AOC-3
Petroleum Hydrocarbon Fractions			
C9-C10 Aromatics	760*	937	AOC-1
C5-C8 Aliphatics	250*	5430	AOC-1
C5-C8 Aliphatics	250*	3290	AOC-2
C5-C8 Aliphatics	250*	1290	AOC-4
C9-C12 Aliphatics	910*	3290	AOC-1
C9-C18 Aliphatics	1000*	1820	AOC-3
C9-C18 Aliphatics	1000*	858	AOC-2
C9-C18 Aliphatics	1000*	856	AOC-1
Benzo a pyrene	4.3*	5.6	AOC-2

* Draft Maine soil remediation guidelines for petroleum fractions.

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3. Are there **complete pathways** between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential Human Receptors (Under Current Conditions)

<u>“Contaminated” Media</u>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food ³
Groundwater	No	No	No	No			No
Soil (surface, e.g., <2 ft)	No	Yes	No	Yes	Yes	No	No
Sediment	No	Yes			Yes	No	No
Soil (subsurface e.g., >2 ft)				Yes			No

Instructions for Summary Exposure Pathway Evaluation Table

1. Strike-out specific Media including Human Receptors’ spaces for Media which are not “contaminated”) as identified in #2 above.
2. enter “yes” or “no” for potential “completeness” under each “Contaminated” Media-- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential “Contaminated” Media - Human Receptor combinations (Pathways) do not have check spaces (“___”). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

- ___ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter “YE” status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).
- X If yes (pathways are complete for any “Contaminated” Media- Human Receptor combination) - continue after providing supporting explanation.
- ___ If unknown (for any “Contaminated” Media- Human Receptor combination) - skip to #6 and enter “IN” status code

Footnotes:

³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

Rationale and Reference(s):

SURFACE SOILS

As shown in an earlier table, there are several areas where contaminant levels in surface soils exceed appropriate guidelines (commercial/industrial worker). This would include three AOCs with Arsenic above the Maine generic background level, which suggests little or no anthropogenic contribution. PCBs were found to be present in one location at a level slightly

above the guidelines while there were very significant exceedances of Benzo-a-pyrene in three of the six AOCs.

There are a number of features of this site that affect the likelihood of human contact with contaminated soils. The site is currently used by a very small number of employees. The office building (Building #15) is regularly used by only two employees who typically spend very little time outside of the building. Access to this location is along a paved roadway with paved parking and walkways. Typically, direct soil contact for these employees would very minimal at best. Building #28 (on lease to the Port Authority) is used only intermittently by up to five or six workers. Access is also by paved roadway with paved parking and loading areas. This building is located in AOC-3 while Building #15 is located in AOC-2.

Direct contact or access to the contaminated soils by site workers will be minimized by the fact that not only is there sufficient paved areas to accommodate nearly all of the usual outdoor activities; much of the unpaved area has limited usefulness due to the presence of old concrete building footings, broken concrete demo debris and other irregular surfaces. Other deterrents particularly in warmer weather include heavy weed and grass growth and a prevalence of fire ant colonies in the exposed soil areas.

Potential exposure was also considered for trespasser and construction worker. Construction worker's exposure will not be a factor because with the exception of the two currently occupied buildings, the site is still undergoing remediation and no new construction will be completed in contaminated areas until remediation is completed. The environmental covenant mentioned earlier in the groundwater section also includes restrictions on soil disturbance in a number of areas on the site identified in an earlier investigation and remediation activity. The only soil disturbance activities will be conducted by environmental professionals with appropriate safety training under a site safety plan.

This site is located at the end of the road in a sparsely populated section of Eastport with the only practical access being via the road which is gated off at the property line after hours. The site could be accessed by foot on the east side by the road but access on the other three sides would be by boat only. Due to the isolated nature of the site, foot traffic near it is virtually non-existent. Other than the few remaining buildings that are secured after hours, the site is wide open with nothing to attract or interest trespassers or other unauthorized visitors to the site. On that basis, trespasser exposure is not considered a concern.

SEDIMENTS

For this determination, sediments were evaluated using the soil exposure criteria. With those criteria, the remedial action guidelines were exceeded in the sediments for lead, arsenic and PCBs. While the maximum values for both lead and PCBs are substantially above the RAGs those highest levels tended to be quite localized. For example, the highest levels of PCBs were found in two localized areas near where electrical transformer had been located and elevated lead was found in only one area. Arsenic tended to be more uniformly distributed.

Potential for exposure to workers and trespassers is expected to be minimal for many of the same reasons as discussed for exposure to surface soils. In addition, there are a number of additional factors that limit exposure to the sediments. First being the sediments are all in the intertidal zone, thus these areas will be under water at least part of the time and some areas are unexposed most of the time. Second is that there is a long term shellfish harvesting prohibition in the entire Broad Cove area which means there will be no reason for shellfish harvesters to be working in that area. Likewise, there will be no consumption of shellfish from this area. This prohibition was put in place by the Maine Department of Marine Resources over ten years ago because of the extensive industrial activity in this area (including a former municipal landfill on the shore of Broad Cove close to this site). This ban is expected to remain in place for the foreseeable future. Finally, the shore and intertidal zone adjacent to this site represent no particular attraction for recreational purposes such as a beach or locations for fishing, picnicking or hiking. Based on this, there is little reason for workers or trespassers to spend time in contact with these sediments.

SUBSURFACE SOILS

A number of contaminants were found in subsurface soils at levels that could present risks to construction workers. As with other soils and sediments found on this site, arsenic levels in most AOCs were found somewhat elevated above the generic background level. One AOC has levels of Benzo a pyrene slightly above the guidelines. Four of six AOCs had petroleum hydrocarbon fractions above the guidelines and levels for C5-C8 Aliphatics fraction in particular tended to be substantially elevated in some locations. Exposure by construction workers to these contaminants is expected to be limited for several reasons. The Environmental Covenant discussed in the groundwater section also has provisions for restrictions on subsurface excavation in a number of areas on this site without prior approval from the Department. This restriction was put in place following an earlier investigation and remediation and applies to many of the current identified impacted areas. As discussed in the surface soil section, the activities on the site are currently limited. Port Authority's activity is limited to the use of one existing building on the site. Any subsurface excavation at this site has the potential for affecting groundwater and would thus be prohibited by the existing environmental covenant without prior permission by the Department. The only soil excavation activities in the impacted areas would be conducted by trained environmental professionals with oversight by the Department. No unprotected exposure by construction workers would be expected.

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- 4 Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant"⁴ (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

 X If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway)- skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

 If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway)- continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

 If unknown (for any complete pathway)- skip to #6 and enter "IN" status code

Rationale and Reference(s): As described in section #3 above for each media, no significant exposures are expected based on current site conditions.

Footnotes:

⁴ If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

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5 Can the "significant" exposures (identified in #4) be shown to be within acceptable limits?

_____ If yes (all "significant" exposures have been shown to be within acceptable limits)- continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable") continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure)- continue and enter "IN" status code

Rationale and Reference(s): _____

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6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

X YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the BASF EASTPORT FACILITY , EPA ID # MED 001 099 308 , located at 30 STANIELS ROAD, EASTPORT, MAINE under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

NO - "Current Human Exposures" are NOT "Under Control."

IN - More information is needed to make a determination.

Completed by (signature) Edward J. Vigneault Date 9/30/09
(print) Edward J. Vigneault
(title) Project Manager

Supervisor (signature) Stacy A. Ladner Date 9/30/09
(print) Stacy A. Ladner
(title) Unit Manager
(EPA Region or State) Maine

Locations where References may be found:

Maine Department of Environmental Protection
Bureau of Remediation and Waste Management
Oil and Hazardous Waste Licensing Unit
Ray Bldg. 28 Tyson Lane
Augusta, Maine

Contact telephone and e-mail numbers

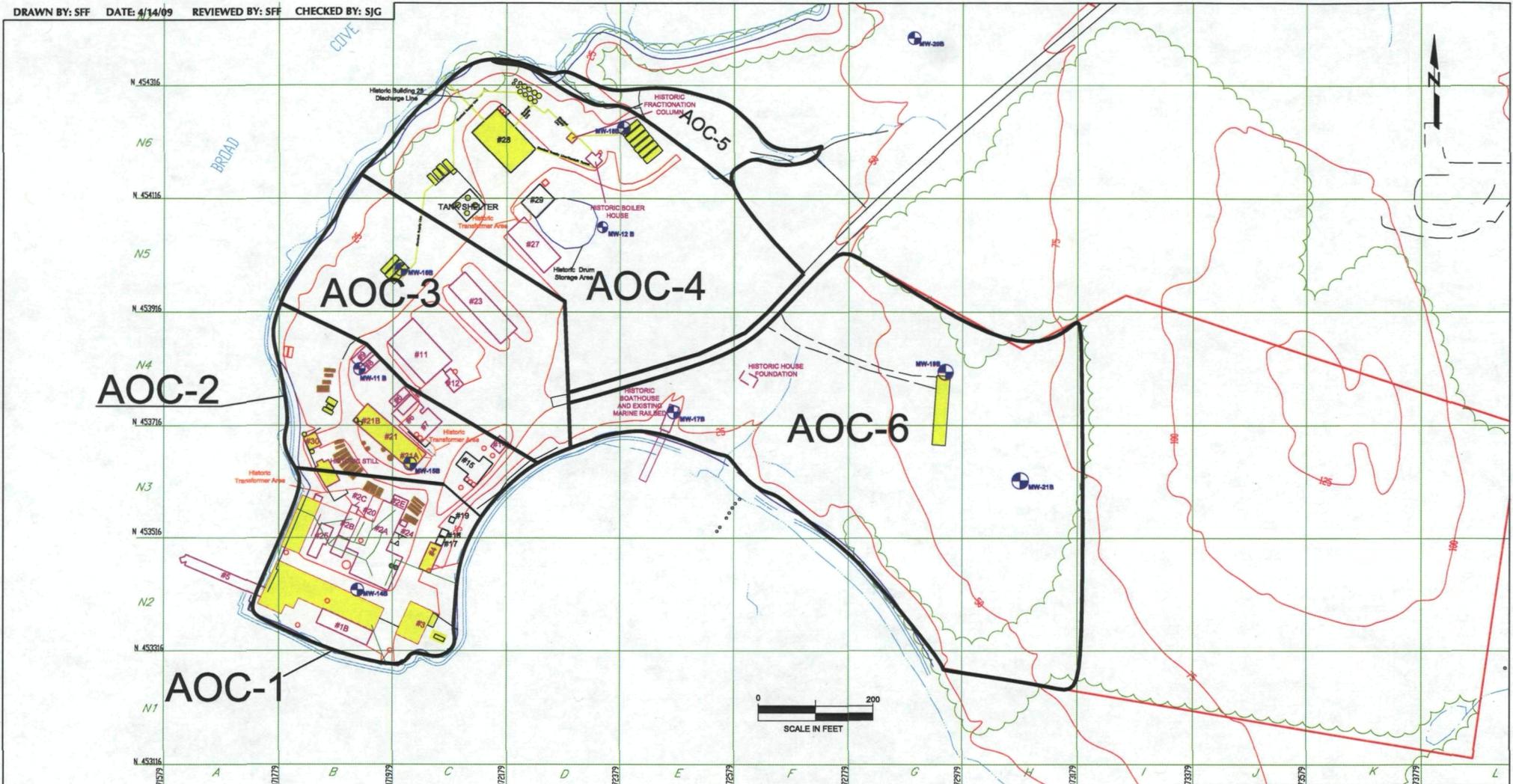
(name) Edward Vigneault
(phone #) 207-287-2651
(e-mail) edward.j.vigneault@maine.gov

Reviewed by
[Signature]
RCRA Corrective Action
US EPA Region 1
4/30/10

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

DRAWN BY: SFF DATE: 4/14/09 REVIEWED BY: SFF CHECKED BY: SJG

015 N:\Active Projects\010-13150-02_BASF-Eastport\Reports\Phase II Technical Memo No. 3\DRIFT.dwg Apr 14, 2009 3:46pm



LEGEND:

- EXISTING BUILDING(S)
- FORMER BUILDING(S)
- BEDROCK GROUNDWATER MONITORING WELL LOCATION

HISTORIC CHEMICAL USAGE:

- Extraction and Refining Solvent Usage (Naphtha, 1,2-DCA, Isopropanol)
- NOTES:** Petroleum Usage (#2, #6 Fuel Oils and/or Gasoline, as noted).
- NOTES:** Acid Usage (Sulfuric and/or Nitric Acid)
- NOTES:** Transformer and/or Potential PCB Area(s)
- Fish Oil and/or Stickwater Storage

Sources: Base Map is a compendium of a 1971 and 1993 Property Site Plan completed for the Mead Corporation by James W. Sewall Company, Old Town, Maine.
 Environ Report, 2004, Document #5478, Book #2878, Page #188
 EOS Research, Remedial Plan for the Burn Pit, Bldg 11 Tanks, and Fire Pond and Outfall Areas, Figures 1-3, July 12, 1999 and EOS Report on Soil Remediation, Figures 1-4, August 1999.
 Horizontal Datum is NAD83 SPME, Vertical Datum is NGVD88.

Site Plan and Potential Source Location Map

LFR BASF Catalysts, LLC
 30 Staniels Road
 Eastport, Maine

Figure 1

015_G:\Active Projects\010-13150-02_BASF-Eastport\Phase II Field Investigation\Bedrock Groundwater\Bedrock Contours.dwg Jun 10, 2009-5:37pm

