# 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:	Newport News Shipbuilding and Dry Dock Company
Facility Address:	4101 Washington Avenue, Newport News, Virginia 23607
Facility EPA ID #::	VAD001307495

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 (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 #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 non-human (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).

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be "**contaminated**"<sup>1</sup> 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)?

Media	Yes	No	?	Rational
Groundwater	Х			Confirmed groundwater constituent concentrations above criteria. See Table 1.
Air (indoors)	X			While not measured directly, a comparison of maximum groundwater concentration to VDEQ VRP Tier III restricted groundwater use/unrestricted (residential) land use of indoor air, indicates that only Vinyl Chloride exceeds this standard (Table 5). See answer to Question 3 for the rational that excludes this pathway from further consideration.
	Λ			Table 1
Surface Water		X		While the discharge of site groundwater into surface water bodies has not been established and surface water concentrations have not been measured, it is not reasonable to suspect that current ground water concentrations will cause risk-based levels to be exceeded if discharge does occur. A comparison of the maximum site groundwater constituent concentrations to the groundwater protection standards yields only one constituent that has a concentration greater than ten times the standard (Vinyl Chloride, 15x, Table 2). Notwithstanding this exceedance, Vinyl Chloride, should it reach a surface water body, is not expected to exceed the VDEQ VRP surface water standard of 5300 ug/L. According to the Hazardous Substances Database, the soil organic carbon/water partition coefficient ( $K_{oc}$ ) for Vinyl Chloride indicates that this compound will partition into the surface water rather than adsorb to suspended solids or sediment. Once in the surface water, volatilization is expected to occur rapidly (volatilization half-life in river modeled at 1 hour).
Sediment		X		While not measured directly, it is not reasonable to suspect that current ground water concentrations will cause sediment risk-based levels to be exceeded if discharge does occur (Tables 3 and 4).
Subsurface Soil (>2ft)	Х			Confirmed subsurface soil constituent concentrations above criteria. See Table 1.
Air (outdoors)		X		Since the majority of the site is covered with concrete, asphalt or vegetative cover, it is not reasonable to suspect that current outdoor air concentrations will exceed risk-based levels.

- 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.

Rational and Reference(s):

Table 1. Groundwater, surface and subsurface soil samples where detected concentrations exceed applicable criteria. Please note that this table is not an all-encompassing list of constituents that exceed criteria at the facility.

	Maximum Detected		
Constituent	Concentration	Level of Concern <sup>a</sup>	Location
	Grou	ındwater	
2-Methylnaphthalene	27 ug/L	9 ug/L	SWMU 12a/MW4
2,4-Dimethylphenol	2,200 ug/L	313 ug/L	SWMU 12a/RW1
Vinyl Chloride	150 ug/L	10 ug/L	SWMU 12a/RW1
1,1-DCA	330 ug/L	301.2 ug/L	SWMU 12a/RW1
Benzene	20 ug/L	5 ug/L	SWMU 12a/RW1
	Surface S	oil (<2ft BGS)	
Aroclor 1254	1.51 mg/kg	1.4 mg/kg	SWMU 10/10-SS-03
Aroclor 1260	1.58 mg/kg	1.4 mg/kg	SWMU 10/10-SS-01
Arsenic	24 mg/kg	1.9 mg/kg	SWMU 10/10-SS-01
Iron	340,000 mg/kg	310,000 mg/kg	SWMU 10/10-SS-01
Lead	610 mg/kg	400 mg/kg	SWMU 10/10-SS-01
Lead	2,200 mg/kg	400 mg/kg	SWMU 42/42-SS-53
Benz(a)pyrene	1,200 mg/kg	390 mg/kg	SWMU 10/10-SS-03
	Subsurface	Soil (>2 ft BGS)	
Trichloroethene	1,800,000 ug/kg	7,200 ug/kg	SWMU/AOC 25/Pit Bottom (5.0-5.5 ft)
Tetrachloroethene	64,000 ug/kg	5,300 ug/kg	SWMU/AOC 25/Pit Bottom (5.0-5.5 ft)
Trichloroethene	360,000 ug/kg	7,200 ug/kg	SWMU/AOC 25/Pit Bottom (7.5-8.0 ft)
Tetrachloroethene	59,000 ug/kg	5,300 ug/kg	SWMU/AOC 25/Pit Bottom (7.5-8.0 ft)
Gasoline Range Organics	2,200 mg/kg	100 mg/kg	SWMU/AOC 25/Pit Bottom (5.0-5.5 ft)
Diesel Range Organics	7,200 mg/kg	100 mg/kg	SWMU/AOC 25/Pit Bottom (5.0-5.5 ft)
Gasoline Range Organics	260 mg/kg	100 mg/kg	SWMU/AOC 25/Pit Bottom (7.5-8.0 ft)
Diesel Range Organics	2,100 mg/kg	100 mg/kg	SWMU/AOC 25/Pit Bottom (7.5-8.0 ft)

a) levels of concern for groundwater are specifically listed in the facilities RCRA Permit, levels of concern for surface and subsurface soil are the USEPA Region 3 RBC Industrial values for soil.

Table 2. Evaluation of groundwater to surface water discharge – a comparison of site groundwater concentrations to the RCRA permit groundwater protection standards.

	Maximum 2nd Q	Groundwater Protection	Maxium [GW]/VRP	
	$2005 [GW]^{a}$	Standard <sup>b</sup>	Tier II Criterion <sup>c</sup>	
Constituent	(ug/L)	(ug/L)	(unitless)	
		Metals		
Arsenic	11.0	50	2.20E-01	
Barium	140.0	2,000	7.00E-02	
Chromium	10.0	1,075	9.00E-03	
Nickel	140.0	389	3.60E-01	
Lead	1.9	833	2.00E-03	
Antimony	4.4	273	1.60E-02	
Vanadium	63.0	977	6.40E-02	
	\$	SVOCs		
bis (2-ethylhexyl) Phthalate	5.9	11.2	5.30E-01	
di-n-butyl Phthalate	4.1	1,565	3.00E-03	
1,2-Dichlorobenzene	1.7	600	3.00E-03	
1,4-Dichlorobenzene	1.5	75	2.00E-02	
Fluorene	1	no standard available		
2-Methylnaphthalene	27	9	3.00E+00	
2-Methylphenol	68	783	8.70E-02	
4-Methylphenol	35	78.3	4.47E-01	
2,4-Dimethylphenol	2,200	313	7.03E+00	
Phenol	18	9,390	2.00E-03	
		VOCs		
Vinyl Chloride	150	10	1.50E+01	
trans-1,2-DCE	18	70	2.57E-01	
1,1-DCA	330	301	1.10E+00	
cis-1,2-DCE	40	70	5.71E-01	
Benzene	20	5	4.00E+00	
Trichloroethene	3.8	10	3.80E-01	
Toluene	180	1,000	1.80E-01	
Ethylbenzene	130	700	1.80E-01	
Xylene (total)	160	10,000	1.60E-02	
Naphthalene	58	626	9.30E-02	
Methylene chloride	5	no standard available		

a) maximum concentration from the 2<sup>nd</sup> quarter 2005 groundwater sampling event in SWMU 12a

b) groundwater protection standard specifically listed in the facilities RCRA Permit

c) ratio of the maximum GW concentration to the protection standard - a value of 10 indicates that the constituent concentration is 10x the groundwater protection standard and therefore a potential concern with respect to surface water discharge

Table 3. Evaluation of groundwater to sediment discharge for organics – a comparison of calculated sediment constituent concentrations to the VDEQ VRP Sediment Screening Criteria.

	GW/Pore-water	Sediment	VRP Sediment	[Sed]/VRP
	Concentration - Cd <sup>a</sup>	Concentration - Cs <sup>b</sup>	Screening Criteria <sup>c</sup>	Sediment Criterion <sup>d</sup>
Constituent	(mg/L)	(mg/kg)	(mg/kg)	(unitless)
bis (2-ethylhexyl) Phthalate	0.006	1.69E+01	4.60E+02	3.67E-02
di-n-butyl Phthalate	0.004	1.62E-01	7.80E+03	2.08E-05
1,2-Dichlorobenzene	0.002	1.66E-02	7.00E+03	2.37E-06
1,4-Dichlorobenzene	0.002	2.58E-02	2.70E+02	9.54E-05
Fluorene	0.001	2.23E-01	3.10E+03	7.18E-05
2-Methylnaphthalene	0.027	3.06E+00	3.10E+02	9.89E-03
2-Methylphenol	0.068	1.55E-01	3.90E+03	3.98E-05
4-Methylphenol	0.035	3.97E+00	3.90E+02	1.02E-02
2,4-Dimethylphenol	2.200	1.15E+01	1.60E+03	7.18E-03
Phenol	0.018	1.30E-02	2.30E+04	5.63E-07
Vinyl Chloride	0.150	6.98E-02	9.00E-01	7.75E-02
trans-1,2-DCE	0.018	1.71E-02	1.60E+03	1.07E-05
1,1-DCA	0.330	4.46E-01	1.60E+04	2.78E-05
cis-1,2-DCE	0.040	3.55E-02	7.80E+02	4.55E-05
Benzene	0.020	3.30E-02	1.20E+02	2.75E-04
Trichloroethene	0.004	9.22E-03	1.60E+01	5.76E-04
Toluene	0.180	6.53E-01	1.60E+04	4.08E-05
Ethylbenzene	0.130	6.73E-01	7.80E+03	8.63E-05
Xylene (total)	0.160	1.25E+00	1.60E+04	7.83E-05
Naphthalene	0.058	1.78E+00	1.60E+03	1.12E-03
Methylene chloride	0.005	1.25E-03	8.50E+02	1.47E-06

a) groundwater/pore water concentration was assumed to be the maximum concentration of detected constituents from the 2<sup>nd</sup> quarter 2005 groundwater sampling event in SWMU 12a

- b) Sediment concentration was calculated using the equilibrium partitioning equation as follows:  $C_s = C_d * K_{oc} * f_{oc}$ , where  $C_s$  = sediment concentration,  $C_d$  = groundwater/pore water concentration,  $K_{oc}$  = partitioning coefficient for sediment organic carbon, and  $f_{oc}$  = organic carbon fraction (set at default of 2.5%). The majority of the  $K_{oc}$  values were taken form USEPA 1996 Soil Screening Guidance: Technical Background Document, Second Edition, EPA/540/R95/128.  $K_{oc}$  values for 2-Methylnaphthalene and 4-Methylphenol were unavailable in this guidance and were derived after a procedure outlined in EPA-823-R-01-01, Appendix B, Page B-3, Log  $K_{oc} = 0.00028+0.983(\log K_{ow})$
- c) VDEQ VRP sediment screening criteria unrestricted residential
- d) ratio of the estimated sediment concentration to the VRP sediment screening criteria

Table 4. Evaluation of groundwater to sediment discharge for metals – a comparison of calculated sediment constituent concentrations to the VDEQ VRP Sediment Screening Criteria.

	GW/Pore-water	Sediment	VRP Sediment	[Sed]/VRP
	Concentration - Cd <sup>a</sup>	Concentration - Cs <sup>b</sup>	Screening Criteria <sup>c</sup>	Sediment Criterion <sup>d</sup>
Constituent	(mg/L)	(mg/kg)	mg/kg	(unitless)
Antimony	0.004	4.95E-03	3.10E+01	1.60E-04
Arsenic	0.011	8.53E-03	4.30E+00	1.98E-03
Barium	0.140	1.82E-01	5.50E+03	3.31E-05
Chromium	0.010	1.08E+03	2.30E+02	4.67E+00
Lead	0.002	1.61E+01	4.00E+02	4.03E-02
Nickel	0.140	6.65E+00	1.60E+03	4.16E-03
Vanadium	0.063	1.58E+00	7.80E+01	2.02E-02

a) groundwater/pore water concentration was assumed to be the maximum concentration of detected constituents from the 2<sup>nd</sup> quarter 2005 groundwater sampling event in SWMU 12a

b) Sediment concentration was calculated using the equilibrium partitioning equation as follows:  $C_s = C_d * K_d * f_{oc}$ , where  $C_s$  = sediment concentration,  $C_d$  = groundwater/pore water concentration,  $K_d$  = soil-water distribution coefficients for inorganic constituents, and  $f_{oc}$  = organic carbon fraction (set at default of 2.5%). All  $K_d$  values were taken form USEPA 1996 Soil Screening Guidance: Technical Background Document, Second Edition, EPA/540/R95/128.

c) VDEQ VRP sediment screening criteria – unrestricted residential

d) ratio of the estimated sediment concentration to the VRP sediment screening criteria

Table 5. Evaluation of groundwater to indoor air pathway – site groundwater concentrations to the VDEQ Indoor Air Criteria.

	Maximum GW Detected	VRP Tier III GW	Maxium [GW]/VRP
	Concentration <sup>a</sup>	Unrestricted Indoor Air <sup>6</sup>	Tier III Indoor Air Criterion <sup>c</sup>
Constituent	(ug/L)	(ug/L)	(unitless)
bis (2-ethylhexyl) Phthalate	5.9	3.40E+02	1.74E-02
di-n-butyl Phthalate	4.1	1.12E+04	3.66E-04
1,2-Dichlorobenzene	1.7	6.78E+03	2.51E-04
1,4-Dichlorobenzene	1.5	1.40E+02	1.07E-02
Fluorene	1	1.98E+03	5.05E-04
2-Methylnaphthalene	27	2.41E+03	1.12E-02
2-Methylphenol	68	5.70E+06	1.19E-05
4-Methylphenol	35	9.22E+05	3.80E-05
2,4-Dimethylphenol	2200	1.43E+06	1.54E-03
Phenol	18	8.28E+07	2.17E-07
Vinyl Chloride	150	5.04E+00	2.98E+01
trans-1,2-DCE	18	4.74E+02	3.80E-02
1,1-DCA	330	6.42E+03	5.14E-02
cis-1,2-DCE	40	5.61E+02	7.13E-02
Benzene	20	3.68E+01	5.43E-01
Trichloroethene	3.8	5.00E+00	7.60E-01
Toluene	180	4.43E+03	4.06E-02
Ethylbenzene	130	1.10E+04	1.18E-02
Xylene (total)	160	1.00E+04	1.60E-02
Naphthalene	58	5.04E+02	1.15E-01
Methylene chloride	5	1.28E+03	3.91E-03

a) maximum concentration from the 2<sup>nd</sup> quarter 2005 groundwater sampling event in SWMU 12a

b) VDEQ VRP Tier III restricted groundwater use/unrestricted (residential) land use of indoor air.

c) ratio of the maximum GW concentration to the Tier III indoor air standard

## **References:**

USEPA 1996, Soil Screening Guidance: Technical Background Document, Second Edition, EPA/540/R95/128 USEPA 2001, Incidence and Severity of Sediment Contamination in Surface Waters of the US. EPA-823-R-01-01 Virginia Department of Environmental Quality, Voluntary Remediation Program, www.deq.virginia.gov/vrprisk O'Brien & Gere, September 2005, Release Assessment Report SWMU/AOC 10, 42, & 44 (surface soil values) O'Brien & Gere, September 2005, Second Quarter 2005 Ground Water Monitoring Report

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)

Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food
Groundwater	no	no	no	no	no	no	no
Air (indoors)	no	no	no	no	no	no	no
Surface Soil (<2ft)	no	no	no	no	no	no	no
Surface Water							
Sediment							
Subsurf. Soil (>2ft)	no	no	no	no	no	no	no
Air (outdoors)							

Instructions for <u>Summary Exposure Pathway Evaluation Table</u>:

- 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.

- **\_\_X\_\_** 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 <u>Pathway Evaluation Work Sheet</u> to analyze major pathways).
- \_\_\_\_\_ 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

Rationale and Reference(s):

- Residents: There are no residents within the shipyard nor hydraulically downgradient of the shipyard. Thus there are no potential residential exposures to impacted groundwater, air (indoors), surface soil or subsurface soil. Further, NGNN is compliant with their Title V permit for air emissions verifying that there are no unacceptable exposures to outdoor air.
- Workers: NGNN imposes strict protocols for any and all work completed at the shipyard. No work is completed without first obtaining a work permit, including a digging permit for any excavation

greater than 1-inch. Permits are obtained with approval from the environmental and facilities divisions. If possible contaminants are suspected to be in the work area then only NGNN safety certified personnel are permitted. All workers, NGNN and contractors, are required to be safety certified by NGNN. NGNN safety certification program is in accordance with OSHA and NGNN site-specific policies. In terms of indoor air, all of the buildings located over groundwater plumes have either structural components or engineering controls in place that preclude vapor intrusion. Thus, there are no unauthorized workers exposed to impacted groundwater, indoor air, surface soil, sediment, or subsurface soil.

- Day-Care: There are no day-care facilities within the shipyard, nor hydraulically downgradient of the shipyard. Thus there are no potential day-care exposures to impacted groundwater, air (indoors), surface soil, or subsurface soil. Further, NGNN is compliant with their Title V permit for air emissions verifying that there are no unacceptable exposures to outdoor air.
- Construction: NGNN imposes strict protocols for any and all construction activities completed at the shipyard. No work is completed without first obtaining a work permit, including a digging permit for any excavation greater than 1-inch. Permits are obtained with approval from the environmental and facilities divisions. If possible contaminants are suspected to be in the work area then only NGNN safety certified personnel are permitted. All workers, NGNN and contractors, are required to be safety certified by NGNN. NGNN safety certification program is in accordance with OSHA and NGNN site-specific policies. Thus, there are no unauthorized construction workers exposed to impacted groundwater, indoor air, surface soil, or subsurface soil.
- Trespassers: NGNN provides services to many Department of Defense and commercial clients and therefore must meet stringent safety and security measures. The facility is open 24-hours per day, 7-days per week with limited entry manned with armed guards. The entire facility is secured on the landside with an uninterrupted barbed security fence. NGNN employs roving security patrols to inspect the integrity of the security system plus maintains continual cameral surveillance. The facility is also secured from the waterside with buoys and signage. A 1000-ft "do not approach" zone is maintained along the waterfront by roving armed guards. In addition, continual cameral surveillance of the waterfront is maintained. Thus, there are no trespassers exposed to impacted groundwater, indoor air, surface soil, or subsurface soil.
- Recreation: Due to the secure and confidential nature of the work performed at the shipyard recreational activities are not permitted at the shipyard nor in the surface waters near the shipyard. The facility is equipped with buoys and signage and a 1000-ft "do not approach" zone is maintained along the waterfront by roving armed guards. In addition, continual cameral surveillance is maintained. Thus, there are no potential recreation exposures to impacted groundwater, indoor air, surface soil, or subsurface soil.
- Food: There are no crops or agriculture at the facility. Further, fishing or shellfish harvesting is not permitted in the surface water around the facility. The facility is equipped with buoys and signage and a 1000-ft "do not approach" zone is maintained along the waterfront by roving armed guards. In addition, continual cameral surveillance is maintained. In order to perform work on large naval ships, carriers, and vessels, the facility must maintain a waterfront of sufficient depth to accommodate the ships. Therefore, there are no shallow or tidal shellfish communities or harvesting. In areas where potential contaminants or hazardous materials are suspected no eating, drinking or smoking is permitted. Thus, there are no potential food exposures to impacted groundwater, indoor air, surface soil, or subsurface soil.

- 4 Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be "**significant**"<sup>4</sup> (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)?
  - \_\_\_\_\_ 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):

<sup>4</sup> 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.

- 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):

- 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 <u>Newport News Shipbuilding</u> facility, <u>EPA ID # VAD001307495</u>, located at <u>4101 Washington Avenue, Newport News, Virginia 23607</u> 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."

Completed by	: (signature)	/s/	Date:	9/30/05
	(print)	Michael Jacobi	_	
	(title)	Project Manager	-	
Supervisor:	(signature)	/s/	Date:	9/30/05
	(print)	Robert Greaves	_	
	(title)	Branch Chief, General Operations Branch 3WC23	_	

Locations where References may be found:

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