

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 6/30/05

RCRA Corrective Action

Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Facility Name: Dixie Metals Company
Facility Address: Highway 531, East Heflin, Louisiana, 71039
Facility EPA ID#: LAD055792097

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?

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.

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).

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Facility Information

The former Dixie Metals Company (Dixie Metals) site is situated on approximately 46 acres on Highway 531 in Webster Parish in Heflin, Louisiana. The site is bounded to the north by residential areas, to the west by the abandoned Louisiana and Arkansas Railroad and several homes, to the east by the Tri-State Concrete Company, and to the south by residential and undeveloped areas and Parmer's Creek. The site operated as a sawmill from 1933 until 1968, when it was purchased by Heflin Industries and redeveloped as a battery breaking and lead reclamation/secondary smelting facility. General Battery Corporation (which became a wholly-owned subsidiary of Exide Technologies, Inc., in 1987) acquired the facility under the name of Dixie Metals in 1974. Operations at the Dixie Metals facility ceased in March 1982, and decommissioning activities were initiated in June 1982. The site is currently clear of former equipment and buildings, except for the battery breaker building, warehouse, office, and pump house (Ref. 2).

The facility recovered and recycled lead, primarily from spent lead-acid batteries. Materials generated from the facility included sulfuric acid, battery casings, and lead. Sulfuric acid from the spent batteries was collected and neutralized in sumps in the battery breaker building, pumped to adjacent steel settling tanks, and ultimately discharged to the North Lagoon. During periods of high rainfall, water in the North Lagoon would overflow into a drainage ditch and flow to the South Lagoon. The North and South Lagoons operated as RCRA-regulated units (SWMU 1 and 2) until 1983 when both lagoons were drained, excavated to remove lead-contaminated sediment, and backfilled with clean soil. Lead-impacted soils were also removed from the drainage ditch connecting the North and South Lagoons (Ref. 2).

Site investigations were conducted in 2000 and 2004 to assess on- and off-site soil impacts, and sediment impacts in Parmer's Creek. The investigations identified arsenic and lead contamination in on-site surface and subsurface soil over the majority of the site. Arsenic, barium, cadmium, and lead contamination were also reported in surface and subsurface soil at several off-site sample locations. Parmer's Creek sediment results indicated lead concentrations above relevant standards approximately 2,400 feet downstream of the property boundary. Groundwater quality and flow direction are monitored by a network of ten groundwater monitoring wells at the Dixie Metals site. Arsenic, cadmium, and lead were reported at low levels in various wells during the 2004 investigation (Ref. 1).

In March 2004, Exide Technologies submitted a Revised Remedial Action Work Plan (RAWP) for the former Dixie Metals site. This work plan includes demolition of on-site buildings, excavation of lead-contaminated soil and sediment (both on- and off-site), construction of an on-site containment cell for contaminated soil and sediment, and site restoration activities (Ref. 2). The RAWP is currently in a public review/comment period and yet to be finalized and implemented.

References:

1. Remedial Action Investigation Report, Former Dixie Metals Site, Heflin, Louisiana, prepared by Advanced Geosciences Corp., dated March 24, 2004.
2. Revised Remedial Action Work Plan, Former Dixie Metals Site, Heflin, Louisiana (Version 5.0), prepared by Advanced Geosciences Corp., dated March 25, 2004.

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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>	<u>Above RECAP screening standards / Metals</u>
Air (indoors) ²	<u>—</u>	<u>x</u>	<u>—</u>	<u>No impact to indoor air</u>
Surface Soil (e.g., <2 ft)	<u>x</u>	<u>—</u>	<u>—</u>	<u>Above RECAP screening standards / Metals</u>
Surface Water	<u>—</u>	<u>x</u>	<u>—</u>	<u>No impact to surface water</u>
Sediment	<u>x</u>	<u>—</u>	<u>—</u>	<u>Above RECAP screening standards / Metals</u>
Subsurf. Soil (e.g., >2 ft)	<u>x</u>	<u>—</u>	<u>—</u>	<u>Above RECAP screening standards / Metals</u>
Air (outdoors)	<u>—</u>	<u>x</u>	<u>—</u>	<u>No impact to outdoor air</u>

_____ 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.

Rationale and Reference(s):

Groundwater: Nine groundwater monitoring wells were installed in 1982 and 1983. The wells were designated MW-1 through MW-6 and WW-2A through WW-4A. The wells were completed with 10 to 20 feet of well screen to maximum depths of 59 feet below ground surface (bgs). Groundwater elevation data obtained from these wells indicate that groundwater flow direction is to the south (Ref. 1). The wells are not referenced in recent documents (Refs. 2 and 3); therefore, it is assumed that the wells have been abandoned. Seven groundwater monitoring wells (MW-101 through MW-107) were installed during initial sampling activities in 2000 and three additional groundwater monitoring wells (MW-108 through MW-110) were installed during supplemental sampling activities in 2004 (Ref. 2). The wells were installed with 10 feet of screen from 50 to 60 feet bgs, except for wells MW-102 (49 to 59 feet bgs), MW-106 (47 to 57 feet

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 risk-based "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.

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bgs), and MW-107 (46.5 to 56.5 feet bgs). Based on the most recent water level data collected on February 3, 2004, depth to water ranges from 31.09 to 46.69 feet bgs.

The most recent groundwater quality data from wells MW-101 through MW-110 were collected in February 2004 (Ref. 2). Samples collected during this effort were analyzed for arsenic, cadmium, and lead. Although all three metals were reported in various wells, only cadmium and lead were detected above Louisiana Department of Environmental Quality (LDEQ) Risk Evaluation/Corrective Action Program (RECAP) groundwater screening standard (GW_SS) values. Table 1 presents the concentrations of cadmium and lead reported in groundwater beneath the Dixie Metals site above relevant RECAP standards.

Table 1. Constituents Detected in Groundwater Above RECAP Standards (mg/L)

Constituent	Well I.D.	Concentration ¹	RECAP GW_SS ²	RECAP GW2 ²	Site-Specific Groundwater Criteria (GW2 * DAF2) ²
Cadmium (Total and Dissolved)	MW-105	0.0069	0.005	0.005	0.037
Dissolved Lead	MW-103	0.24	0.015	0.015	0.111
Total Lead	MW-103	1.1 J	0.015	0.015	0.111
	MW-101	0.022 J	0.015	0.015	0.111

- Notes:
1. Samples collected and laboratory analyzed in February 2004 (Ref. 2).
 2. Criteria listed are the RECAP GW_SS, Groundwater Class 2A Drinking Water (GW2), and the RECAP site-specific criteria with calculation of the dilution and attenuation factor (DAF2) based on aquifer thickness and distance to the nearest point of exposure.
 3. J = Concentration qualified as estimated.

Cadmium was detected in groundwater in monitoring well MW-105 (total and dissolved = 0.0069 mg/L) above the RECAP GW_SS of 0.005 mg/L. Monitoring well MW-105 is located downgradient of the former main landfill area in the eastern portion of the site. As indicated in Table 1, the cadmium concentration in monitoring well MW-105 also exceeds the RECAP GW2 value. However, under RECAP, it is possible to develop a site-specific groundwater screening criteria, which is calculated as the product of the GW2 value and an associated DAF2. Input parameters for selection of an appropriate DAF2 include the distance from the point of compliance (POC) to the point of exposure (POE) and the thickness of the source area (Sd).

A query of the Louisiana Department of Transportation and Development's Registered Wells Database lists three public supply wells located within a two-mile radius of the former Dixie Metals facility. Two of these public supply wells are located in Heflin, northwest of the former Dixie Metals facility, and the third well is located approximately 1.5 miles southwest of the former Dixie Metals facility. The three public supply wells are screened in the Wilcox Aquifer, which underlies and is hydraulically isolated from the Sparta Sand aquifer and the saturated units underlying the site (Ref. 1). Because site-related contamination is not present in the Wilcox Aquifer, the three public supply wells do not represent a potential POE. The results of a March 2005 groundwater well use survey also indicated the residents of Heflin are connected to public

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water supply; thus, residential wells are not a POE. Nevertheless, to be conservative, a distance to the POE of 251 to 500 feet was used and the Sd was assumed to be equal to twice the screened interval (i.e., 20 feet). According to RECAP, the appropriate DAF2 for these conditions is 7.4. The resulting site-specific groundwater criterion for cadmium is 0.037 mg/L. As presented in Table 1, cadmium in well MW-105 does not exceed the conservative site-specific groundwater criteria.

Total and dissolved lead were detected in monitoring well MW-103 (1.1 and 0.24 mg/L, respectively) above the RECAP GW_SS of 0.015 mg/L in February 2004 (Ref. 2). These lead concentrations also exceed the site-specific groundwater criteria for lead (0.111 mg/L) calculated using the appropriate DAF2. However, because downgradient wells MW-104 and MW-106 report lead concentrations below the GW_SS, impacts to groundwater in the area of MW-103 appear to be limited in aerial extent. Total lead was also reported at 0.022 mg/L in well MW-101. Although this concentration is above the generic GW_SS, the site-specific groundwater criterion for lead has not been exceeded.

Based on this analysis, only total and dissolved lead exceedances in well MW-103 will be carried forward for further evaluation in this EI determination.

Indoor Air: Volatile organic compounds (VOCs) are not present in soil or groundwater at the site, thus migration of contaminants into indoor air is not currently a concern.

On-site Surface/Subsurface Soil: Initial and supplemental sampling activities were conducted in 2000 and 2004. Initial sampling activities were conducted to characterize on-site surface/subsurface soil. Soil samples were collected from 90 grid location across the site and analyzed for lead using an x-ray fluorescence (XRF) meter (Ref. 2). The results of the initial sampling event indicated surface/subsurface soil lead concentrations exceeded the LDEQ RECAP industrial soil screening value (SOIL_SSi) of 1,700 mg/kg at depths from zero to four feet bgs across the site, and at depths greater than four feet bgs at several isolated locations. During supplemental sampling activities 20 surface soil samples were collected (zero to one feet bgs) and analyzed for arsenic, barium, cadmium, and lead using a XRF meter. Arsenic and lead were detected in a majority of on-site surface soil sample above the RECAP Soil_SSi (12 mg/kg and 1,700 mg/kg, respectively) (Ref. 3). The maximum detected concentrations of lead in surface and subsurface soil were 151,109 mg/kg (sample E3-4, 1.5 feet bgs) and 92,200 mg/kg (sample H8-1, 3 feet bgs), respectively. The maximum detected concentration of arsenic in surface soil was 1,100 mg/kg (E1-4, 0-1 feet bgs) (Ref. 3).

Off-site Surface/Subsurface Soil: Supplemental sampling activities conducted in 2004 included characterization of off-site surface/subsurface soil. A total of 248 off-site soil samples were collected and analyzed for arsenic, barium, cadmium, and lead using a XRF meter. Arsenic, cadmium, and lead were detected in surface and/or subsurface soil to the east, west, and south of the site property boundary above LDEQ RECAP non-industrial soil screening values (SOIL_SSni). Barium was detected in off-site surface/subsurface soil, but was detected below LDEQ RECAP SOIL_SSni. The maximum detected concentrations for the aforementioned metals in off-site surface/subsurface soil are summarized in Table 2 (Ref. 2).

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Table 2. Constituents Detected in Off-Site Surface/Subsurface Soil Above RECAP Standards (mg/kg)

Constituent	Sample I.D.	Maximum Detected Concentration	RECAP SOIL_SSni
Surface Soil			
Arsenic	K1A-3(1-2 ft. bgs)	1,600	12
Lead	K1A-3(1-2 ft. bgs)	160,000	400
Subsurface Soil			
Arsenic	J1A-3 (2-3 ft. bgs)	37	12
Lead	M3-1 (2-3 ft. bgs)	1,300	400

Surface Water: No surface water bodies are present on site, but storm water flows into Parmer's Creek, which is located south of the site. No surface water data is currently available for Parmer's Creek. However, according to the available file materials, surface water flow in Parmer's Creek is intermittent and present during rain events (Refs. 2, 3). Thus, direct contact with potentially contaminated surface water is not expected to be complete exposure pathway. As a result, surface water is not being considered a medium of concern and will not be carried forward for further evaluation in this EI determination.

Sediment: Initial and supplemental sampling activities were conducted in 2000 and 2004 and included characterization of sediment in Parmer's Creek. Eleven sediment samples were collected and analyzed for lead during the initial sampling event and 22 sediment samples were collected from Parmer's Creek during the supplemental sampling activities and analyzed for arsenic in addition to lead. Arsenic and lead concentrations exceeded the RECAP SOIL_SSni approximately 2,300 feet downstream of the property boundary. The maximum detected concentrations of arsenic and lead in sediment are 150 mg/kg (SED900/M00-0.5/1-25/04) and 5,000 mg/kg (SED900/M00-0.5/1-25/04), respectively (Ref. 3).

Outdoor Air: No outdoor air investigations have been conducted at the site. However, since VOCs have not been detected in groundwater, migration of VOCs from groundwater into outdoor air via volatile emissions is not expected to be of concern. Although contaminated particulates may be present at the site, inhalation of particulates is not expected to be a significant exposure pathway for two reasons. First, the site is not active and a majority of the site is covered with vegetation or pavement, which minimizes the potential for particulate emissions in outdoor air from the site. Second, natural dispersion will likely reduce the amount of particulates in outdoor air at the site. Given the aforementioned reasons, migration of contaminants into outdoor air is not currently a concern at this site, and outdoor air is not considered an impacted media for purposes of this EI determination.

References:

1. RCRA Equivalency Demonstration for the RCRA Regulated Units at the Former Dixie Metals Facility, Heflin, Louisiana, prepared by Exide Corporation, dated February 1992.
2. Remedial Action Investigation Report, Former Dixie Metals Site, Heflin, Louisiana, prepared by Advanced Geosciences Corp., dated March 24, 2004.
3. Revised Remedial Action Work Plan, Former Dixie Metals Site, Heflin, Louisiana (Version 5.0), prepared by Advanced Geosciences Corp., dated March 25, 2004.

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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	no	no
Air (indoors)							
Surface Soil (e.g., <2 ft)	no	no	no	yes	no	no	no
Surface Water							
Sediment	no	no	no	no	no	no	no
Subsurf. Soil (e.g., >2 ft)	no	no	no	yes	no	no	no
Air (outdoors)							

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

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

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Rationale and Reference(s):

The Dixie Metals site is an inactive industrial facility and no residences or day-care centers are present on the property. Thus, residential and day-care exposure to potentially contaminated media are not considered potentially complete exposure pathways. The Dixie Metals facility is not used for agriculture; thus exposure to food impacted by site-related activities is also not considered a complete exposure pathway.

Groundwater: As indicated in response Question No. 1, a query of the Louisiana Department of Transportation and Development's Registered Wells Database lists three public supply wells located within a two-mile radius of the former Dixie Metals facility. Two of these public supply wells are located in Heflin, northwest of the former Dixie Metals facility, and the third well is located approximately 1.5 miles southwest of the former Dixie Metals facility. The three public supply wells are screened in the Wilcox Aquifer, which underlies and is hydraulically isolated from the Sparta Sand aquifer and the saturated units underlying the site. Because site-related contamination is not present in the Wilcox Aquifer, the three public supply wells do not represent a potential POE. A physical groundwater well use survey was conducted in March 2005 and no private residential wells were identified downgradient of the site. Thus, exposure to contaminated groundwater associated with site-related activities is not currently considered a complete exposure pathway.

On-Site Surface/Subsurface Soil: The Dixie Metals site is surrounded by a perimeter fence that restricts access to the site by trespassers. Signs are also posted at various locations on the fence, and clearly state that no trespassing is allowed. Thus, exposure to impacted on-site surface/subsurface soil by trespassers is not currently considered a complete exposure pathway. Because the facility is currently inactive, on-site workers exposure is also not a complete exposure pathway. Construction workers (e.g., workers conducting remedial activities) may potentially be exposed to contaminated surface/subsurface soil at the site. Thus, construction worker exposure to contaminated surface/subsurface soil was considered a potentially complete exposure pathway.

Off-Site Surface/Subsurface Soil: The majority of off-site surface/subsurface soil sample locations with exceedences of arsenic and lead are within the public access right-of-way for Route 792 (Main St.) and Route 531. These areas are covered with vegetation and, because they are adjacent to roadways, are not likely to be conducive to recreational activities. Construction workers (e.g., utility workers) may be exposed to contaminated surface/subsurface within these areas. Thus, construction worker exposure to contaminated off-site surface/subsurface soil was considered a potentially complete exposure pathway.

Arsenic and lead were also detected above LDEQ RECAP SOIL_SSni at off-site surface/subsurface soil sample locations at a drainage swale on the Tri-State Concrete Company property. The Tri-State Concrete Company is an active industrial facility. However, the drainage swale is located in a heavily wood area where no facility activities are conducted. Thus, on-site workers are not expected to come in direct contact with potentially contaminated surface/soil. A perimeter fence is bounds the Tri-State Concrete Company, Inc. facility and, thus, no trespassers are expected to be able to access the site. Thus, no complete exposure pathways are present for this area.

Sediment: Parmer's Creek is located south of the Dixie Metals facility and runs through residential properties in a rural area of Heflin. The banks of Parmer's creek are heavily vegetated and are not easily accessible by residents or recreators. Because surface water flow in Parmer's Creek is limited (as described in Question No. 2), it is not anticipated that the creek would attract recreational activities such as wading or swimming. Poison ivy, ticks, and mosquitoes are in abundance in this area, which also serve as effective deterrents for recreational activities in the creek. In addition, Lake Bistineau is located a few miles to the

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west of Heflin and is a more attractive area for recreational activities (e.g., fishing and swimming) than Parmer's Creek. Considering the aforementioned information, the sediment exposure pathway was not considered complete for residents or recreators.

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4. Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be "significant"⁴⁴ (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):

Surface/Subsurface Soil: Although construction worker exposure to contaminated on-site surface/subsurface soil is considered a potentially complete exposure pathway, exposure is not expected to be significant due to the institutional controls in place at the Dixie Metals facility. Worker safety procedures (e.g., personal protective equipment [PPE]) have been established, in accordance with applicable Occupational Health and Safety Administration (OSHA) regulations and guidance, to mitigate potential exposures to contaminated surface/subsurface soil. In addition, construction workers performing intrusive activities at the Dixie Metals facility are required to implement a health and safety plan, in accordance with applicable OSHA regulations and guidance, to mitigate potential exposure to contaminated surface/subsurface soil. Thus, construction worker exposure to on-site contaminated surface/subsurface soil is not expected to be significant.

In addition, to mitigate potential construction worker (e.g., utility worker) exposure to contaminated off-site surface/subsurface soil, LDEQ has posted signs within the impacted off-site areas. The signs indicate that LDEQ should be contacted before any digging activities occur to ensure that the appropriate OSHA regulations (e.g., use of PPE) are followed while performing intrusive activities within these areas. Thus, construction worker exposure to off-site surface/subsurface soil contamination is not expected to be significant.

⁴⁴ 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):

Not Applicable

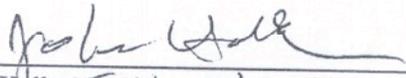
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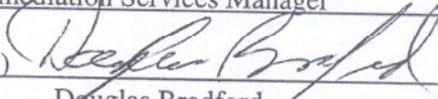
6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

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 Dixie Metals facility, EPA ID # LAD055792097, located at Heflin, Louisiana, 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.

Approved by: (signature)  Date 6/30/05
(print) John Halk JOHN HALK
(title) Remediation Services Manager

Supervisor (signature)  Date 6/30/05
(print) Douglas Bradford
(title) Geologist Supervisor
(EPA Region or State) Louisiana Department of Environmental Quality, EPA Region 6

Assistance completing the environmental indicator form provided by Angela Sederquist, Booz Allen Hamilton.

Locations where references may be found:

LDEQ Public Records.

Contact telephone number and e-mail:

John Halk
225-219-3217
John.halk@la.gov

Handwritten: CPD-M
3/17/06

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.