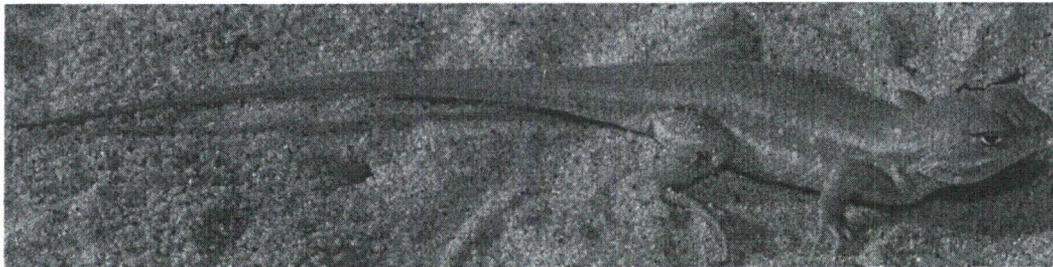


**Status and Habitat of the Dunes Sagebrush Lizard  
at the Proposed Site for the International Isotopes  
Fluorine Products Facility in Lea County, New  
Mexico**



**PREPARED FOR**

**International Isotopes Fluorine Products, Inc.**

**PREPARED BY**

**Terry Scarafiotti, Wildlife Biologist**



**GL ENVIRONMENTAL, INC.**

**P.O. BOX 1746**

**LAS VEGAS, NM 87701**

**(505) 454-0830**

## Table of Contents

<b>INTRODUCTION .....</b>	<b>3</b>
<b>METHODS .....</b>	<b>3</b>
<b>RESULTS .....</b>	<b>3</b>
Site Description.....	3
Dunes Sagebrush Lizard Habitat Description.....	3
<b>CONCLUSION .....</b>	<b>4</b>
<b>PHOTOS AND FIGURES.....</b>	<b>5</b>
Photo 1. Shortgrass prairie with intermittent mesquite.....	6
Photo 2. Shortgrass prairie with intermittent mesquite.....	6
Photo 3. Sandy-loam soil type .....	7
Photo 4. Sandy-loam soil type .....	7
Photo 5. Dunes sagebrush lizard.....	8
Photo 6. Dunes sagebrush lizard habitat.....	8
Figure 1. Expected range of <i>Sceloporus arenicolus</i> .....	9
<b>REFERENCES.....</b>	<b>10</b>

## **Introduction**

The purpose of this report is to evaluate the proposed construction site for the International Isotopes Fluorine Products, Inc. (IIFP) facility for the possible presence of the dunes sagebrush lizard (*Sceloporus arenicolus*). The dunes sagebrush lizard (*Sceloporus arenicolus*), often called the sand dune lizard, occurs in Lea County, is listed on the State of New Mexico Endangered Species list, and is a candidate for the federal Endangered Species list (Photo 5). This report will evaluate proposed site's biological features and compare them to the habitat requirements of the dunes sagebrush lizard.

## **Methods**

Field work for this study was conducted on November 10<sup>th</sup>, 2010. GL Environmental staff conducted a visual walk-through of the proposed IIFP site. Observations were made for habitat comparison required for the sand dune lizard (*Sceloporus arenicolus*). Photographs of the vegetative type along with the soil type were taken for documentation of the habitat that occurs on the proposed site.

## **Results**

### ***Site Description***

The proposed site is located in Section 27, Township 18S, Range 36E. The approximate center of the IIFP Site is located approximately at 32°43'N and 103°20'W. The site is approximately 10 miles west of Hobbs, New Mexico on NM Highway 483 and 1 mile north of the Carlsbad Hobbs Highway (US 180).

The proposed site for the IIFP is comprised of a shortgrass prairie with intermittent mesquite (Photos 1 and 2). Shortgrass prairies are comprised of several herbaceous plant-soil associations including side-oats grama (*Bouteloua curtipendula*), blue grama (*Bouteloua gracilis*), and buffalograss (*Büchloe dactyloides*) on well drained soils or rocky slopes and blue grama/hairy grama and (*Bouteloua hirsuta*) on loamy or sandy soils. The IIFP site contains sandy loam soils (Photos 3 and 4).

### ***Dunes Sagebrush Lizard Habitat Description***

The Dunes Sagebrush lizard is endemic to the Shinnery Oak Dune Habitat (Photo 6) and sand blowout areas within the shinnery oak (Sais, 2003).

The dunes sagebrush lizard uses the shinnery oak roots for their burrows. The lizard retreats to these burrows when threatened or for thermoregulation when the sand becomes too hot or too cold. Individuals predominantly occupy non-vegetated sand dune blowouts and utilize blowouts with particular physical characteristics due to thermoregulatory, reproduction, and foraging requirements (Chan, Fitzgerald, & Zamudio, 2009).

According to Charles Painter, herpetologist for New Mexico Game and Fish, the habitat requirements for the dunes sagebrush lizard are as follows:

*Sceloporus arenicolus* is a small, terrestrial lizard restricted to sand dune formations inhabited by shinnery oak (*Quercus havardii*). Shinnery oak dunes support dense patches of shinnery oak and scattered sand sage (*Artemisia filifolia*) as co-dominant plant species and patches of open sand and wind-created sandy blowouts. Throughout the range in New Mexico and Texas elevation varies from ca. 780-1400 m (ca. 2550-4595 ft). There are significant differences in the composition of sand between sites occupied and unoccupied by *S. arenicolus*, with occupied sites having slightly coarser sand than unoccupied sites (Painter, 2005).

The habitat needed for *S. arenicolus* is further described in *Amphibians & Reptiles of New Mexico* as “restricted to the vicinity of active and semi-stabilized sand dunes within the Mescalero Sands. These dunes occur to an elevation of 1190 m above sea level and support scattered strands of *Quercus havardii* and *Artemisia filifolia* as co-dominant plant species” (Degenhardt, Painter and Price, 1996) . The median sand grain size of 0.201mm was found in these habitats occupied by *S. arenicolus*.

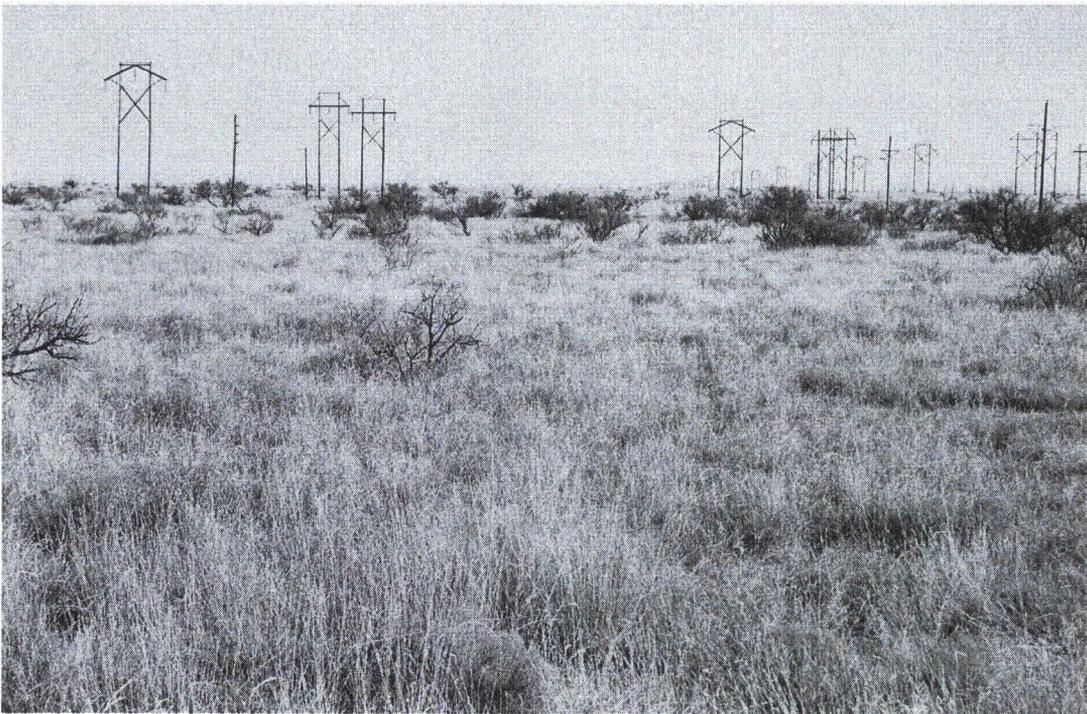
Photo 6, taken in southwestern Lea County, New Mexico, is an example of the habitat needed to support the dunes sagebrush lizard. Dense vegetation with open sand blowout sites provides the microhabitat needed for the survival of this lizard.

## Conclusion

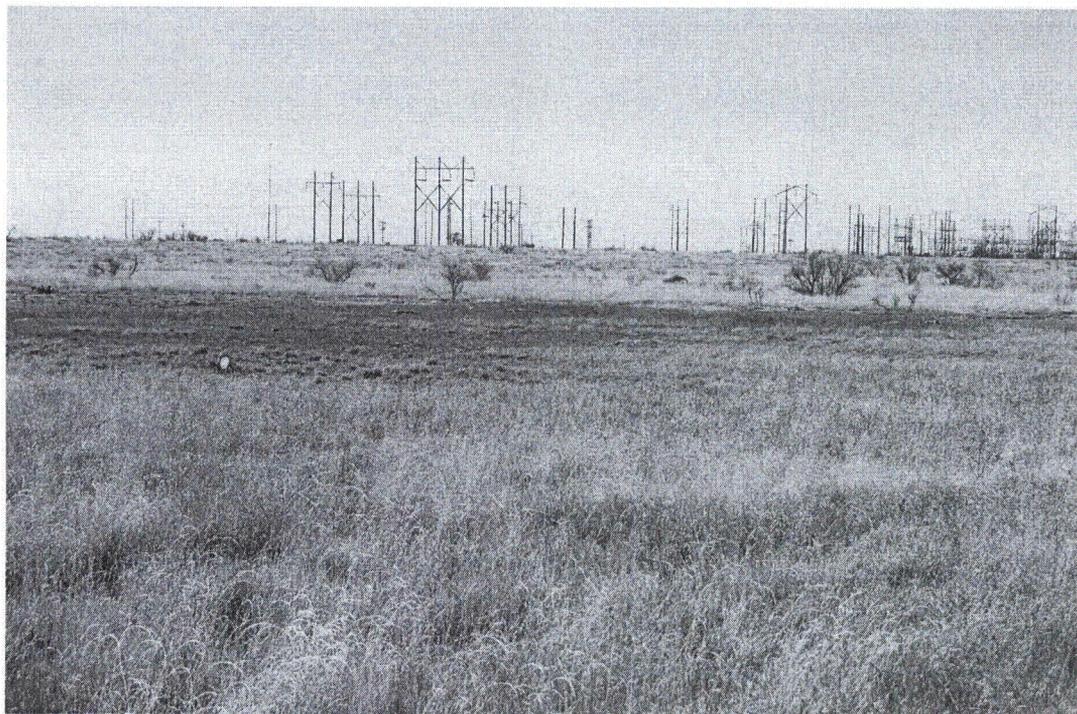
The lack of the shinnery oak on the proposed location leads to the conclusion that the dunes sagebrush lizard does not exist at this site. The site does not support shinnery oak or have the required sand blowouts which comprise the dune sagebrush lizard’s primary habitat. In addition to the lack of appropriate soil types, there are not enough sand particles in the appropriate size range to meet the habitat needs of this species.

The habitat needed for this species is approximately 7 miles south of the proposed site. The lack of the shinnery oak and sand dunes on the proposed location makes it unlikely that the dunes sagebrush lizard exists at this location.

## **Photos and Figures**



**Photo 1. Shortgrass prairie with intermittent mesquite**  
Photo by Terry Scarafiotti



**Photo 2. Shortgrass prairie with intermittent mesquite**  
Photo by Terry Scarafiotti



**Photo 3. Sandy-loam soil type**  
Photo by Terry Scarafiotti.



**Photo 4. Sandy-loam soil type**  
Photo by Terry Scarafiotti.

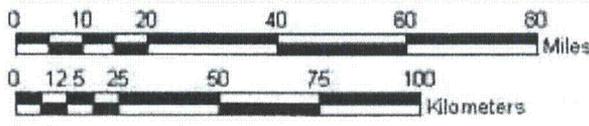
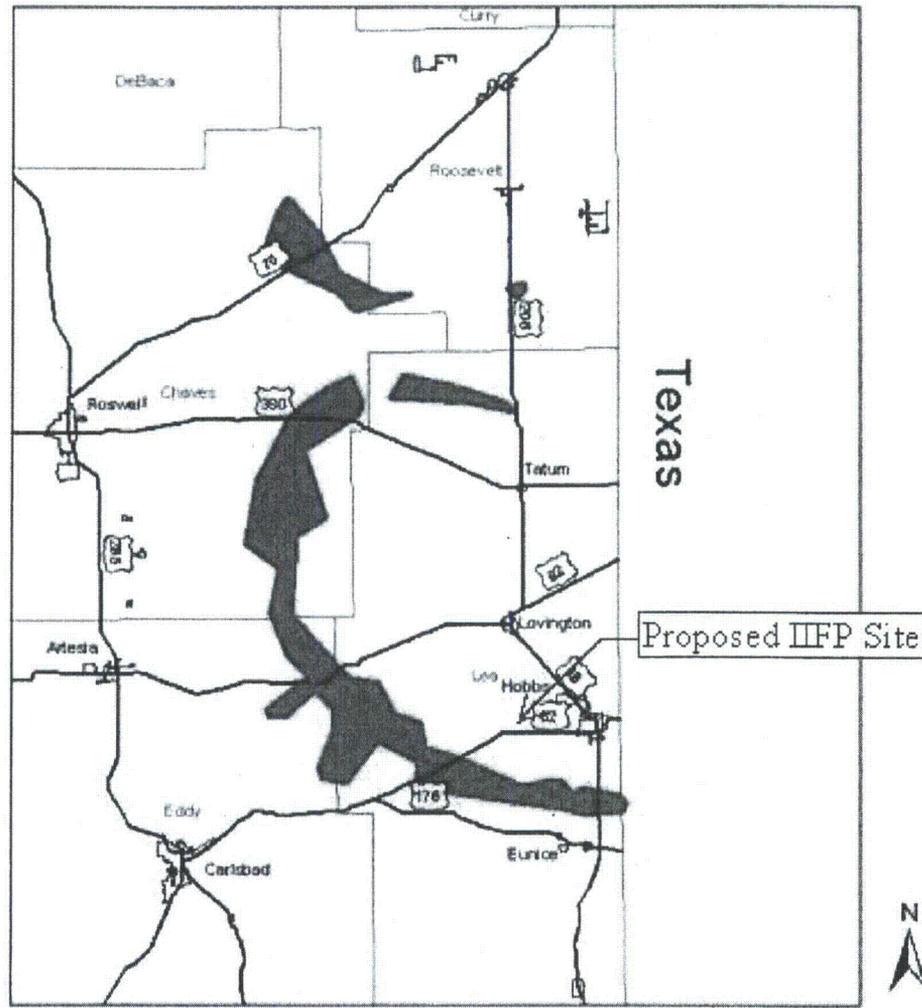


**Photo 5. Dunes sagebrush lizard**  
Photo by Michael T. Hill.

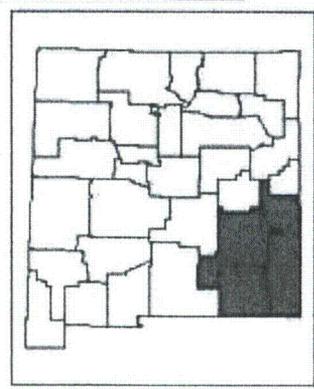


**Photo 6. Dunes sagebrush lizard habitat**  
Photo by Don Sias.

Figure 1. Expected range of *Sceloporus arenicolus*



Expected Range  
of the  
Sand Dune Lizard  
*Sceloporus arenicolus*



## References

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- Sias, D.S. 2003. The status of the sand dune lizard, *Sceloporus arenicolus* and its habitat in Eddy County, New Mexico on CBS Operating Corporation leases northeast of Loco Hills. Submitted to the Bureau of Land Management (Carlsbad office) and CBS Operating Corporation. CBS Operating Corp., 300 W Louisiana, STE.200, P.O. Box 2236, Midland, TX 79702.

November 29, 2010

Department of the Army  
Albuquerque District Corp of Engineers  
Las Cruces Regulatory Office  
Mr. Richard Gatewood  
505 South Main Street, Suite 142  
Las Cruces, NM 88001

Las Cruces, NM

RE: Waters of the U.S. Determination

Dear Mr. Gatewood:

The purpose of this letter is to request that the United States Army Corp of Engineers (USACE) determine whether "Waters of the United States" are present in Section 27, Range 18 S, Township 36 E in Lea County New Mexico. Section 27 is located at 654,538 E, 3,622,095 N (UTM, NAD 83, Zone 13) or approximately 10 miles west of Hobbs, NM (See Map 1). A USACE Approved Jurisdictional Determination Form and 3 maps are attached to this letter.

International Isotopes Fluorine Products plans to construct and operate a facility on 40 acres of land within Section 27 (640 acre total). The facility will utilize depleted uranium hexafluoride to produce high purity inorganic fluorides, uranium oxides, and anhydrous hydrofluoric acid. The fluoride gas products and anhydrous hydrogen fluoride will be sold for various industrial applications.

#### **Surface Drainage**

Two small intermittent drainages are located on the southwest quadrant of Section 27 (Map 2). Base flow conditions were not observed within the drainages during an October 23, 2010 site visit. Surface flows most likely occur in response to precipitation events. The drainages grade to the southeast and coalesce approximately 1,300 ft south of the section boundary. The western drainage is clearly defined on Section 27 due to a moderately incised channel and the presence of Honey Mesquite (*Prosopis glandulosa*) bushes along the banks. The drainage to the east is shallow and not easily delineated from the surrounding land surface.

The coalesced drainage continues to grade to the south / southeast toward Monument Draw. Monument Draw is a major surface drainage feature in southern Lea County and is clearly present in topographical maps approximately 14 miles southeast of the section boundary. Although the drainage present in Section 27 grades toward Monument Draw, a review of

topographic maps did not reveal a clear physical connection to Monument Draw. The drainage terminates in a playa approximately 8 miles southeast of the section (Map 3).

### **Surface Depressions**

Small surface depressions are located throughout Section 27. Several of the most substantial depressions are identified on Map 2. The depressions tend to be circular in shape and range from 50 ft to 300 ft in diameter and 3 ft to 5 ft in depth below the surrounding grade. The depressions occasionally fill with water in response to precipitation events. The depressions were dry during the October 23, 2010 site visit. The frequency and duration of surface water in the depressions is unknown, however, it is likely that water or saturated conditions are present for less than 10% of the year.

A change from the surrounding vegetation community occurs within the surface depressions. Vegetation within the depressions is dominated by the perennial grasses Burro grass (*Scleropogon brevifolius*) and Galleta Grass (*Pleuraphis jamesii*). Neither plant species are included in the *National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary*. Vine Mesquite (*Panicum obtusum*), Western wheatgrass (*Pascopyrum smithii*), and Blueweed (*Helianthus ciliaris*) were present at low densities (<5% of areal herbaceous cover). Each of these three species are described as either FAC or FAC- in the National List.

A soil core was collected from two of the deeper depressions on Section 27. Each of the cores was approximately 16 inches in depth. The soil consisted of dark brown sandy to silty loam with some organic matter. No mottling or sulfidic material was observed in the cores.

### **Conclusion**

It is the opinion of GL Environmental, Inc. that waters of the U.S are not present in Section 27. Surface drainage flows are infrequent, low volume and short in duration. Additionally, the drainage is not connected through surface channels to regional surface water features. Surface depressions are not dominated by wetland plants, lack indicators of anoxic soil conditions, and most likely are not saturated for more than 10% of the year. The surface depressions lack the characteristics of a wetlands as defined in the *Corps of Engineers Wetlands Delineation Manual, January 1987*. GL Environmental, Inc. seeks concurrence from the USACE that any water features on Section 27 are isolated and "Waters of the U.S." are not present within Section 27.

If you have any questions regarding this submittal or require further information please contact me at (505) 454-0830.

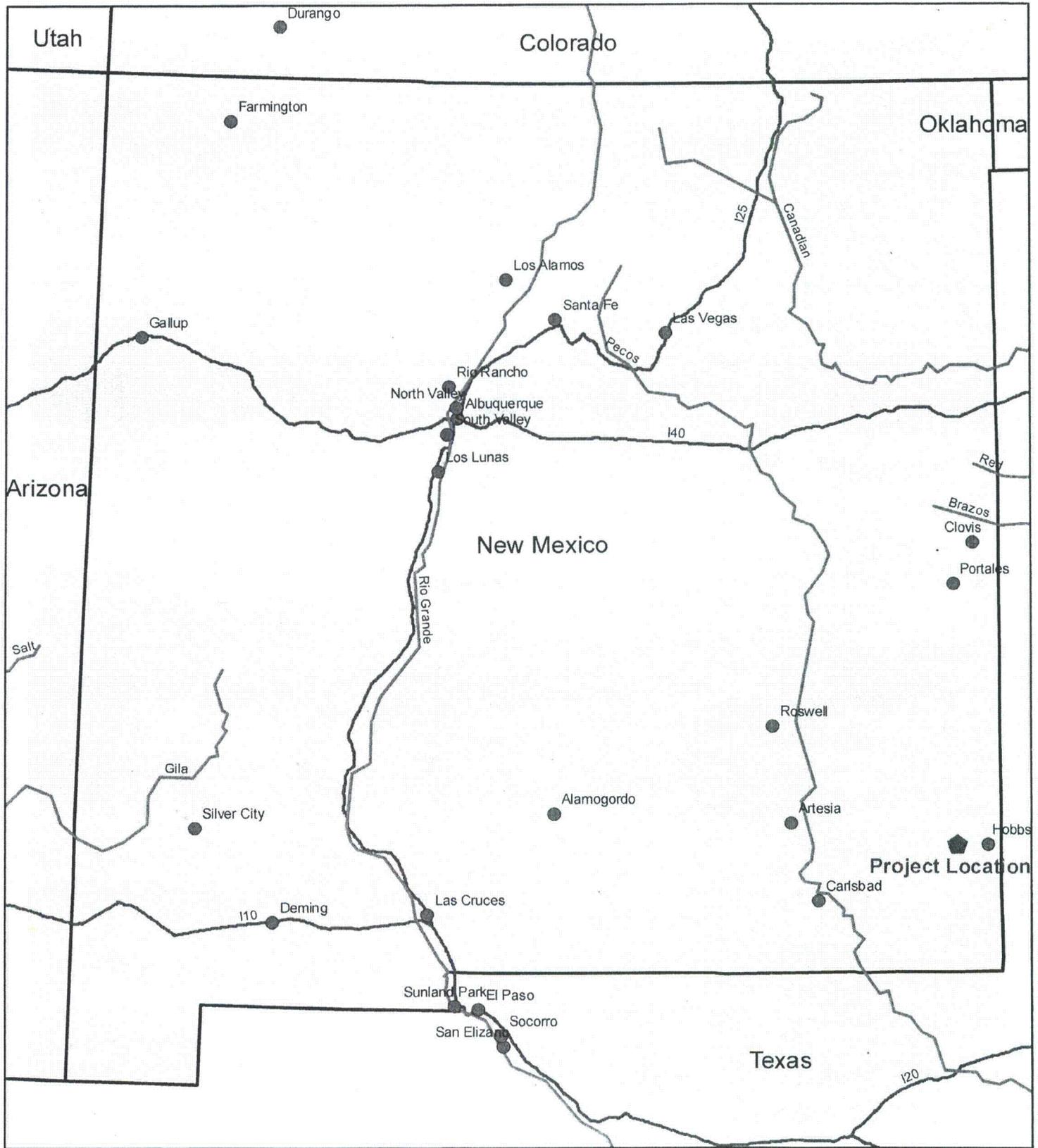
Sincerely,

Matthew Lane

GL Environmental, Inc.

Enclosures: Maps 1-3, USACE Approved Jurisdictional Determination Form

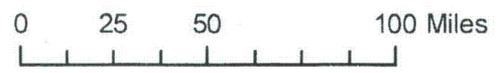
DRAFT



**International Isotopes Fluorine Products  
Section 27, Township 18 S, Range 36 E  
Map 1**

N

UTM, NAD 83, Zone 13  
November 23, 2010

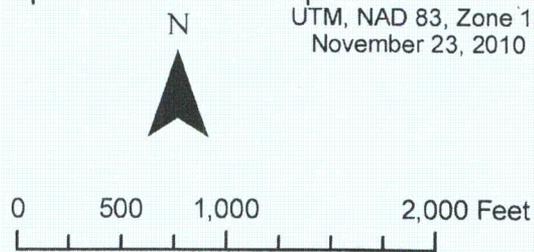


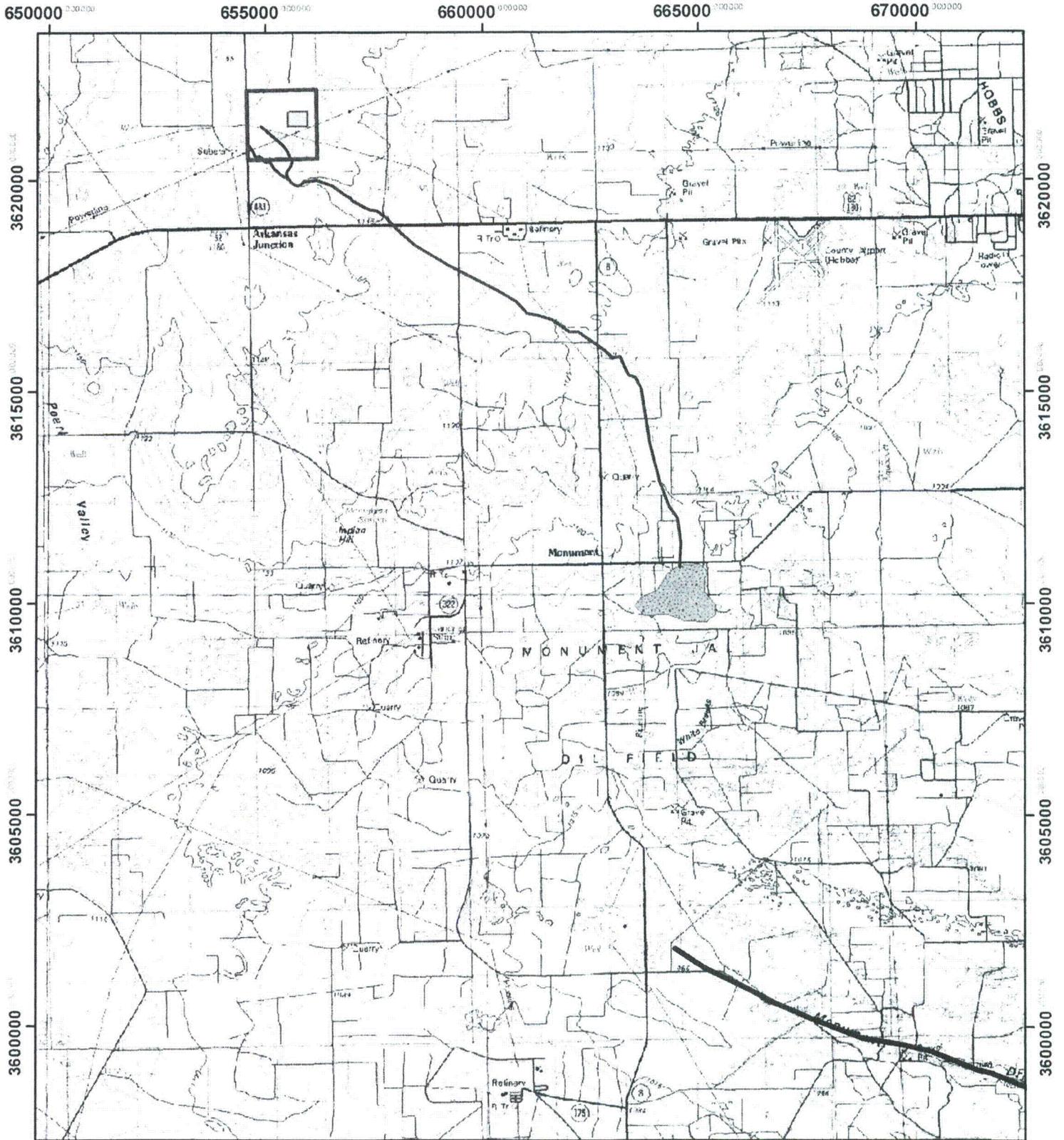


**International Isotopes Fluorine Products  
Section 27, Township 18 S, Range 36 E  
Map 2**

UTM, NAD 83, Zone 13  
November 23, 2010

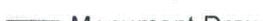
- Section 27 Boundary
- Surface water drainage feature
-  IIFP Facility Boundary
-  Depressions

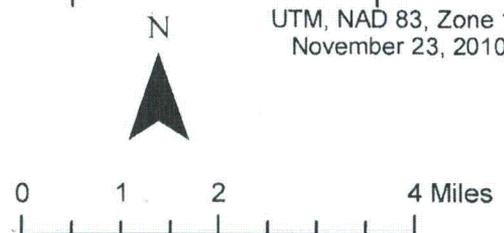




**International Isotopes Fluorine Products  
Section 27, Township 18 S, Range 36 E  
Map 3**

UTM, NAD 83, Zone 13  
November 23, 2010

-  Section 27 Boundary
-  Surface water drainage feature
-  Monument Draw
-  playa
-  IIFP Facility Boundary



APPROVED JURISDICTIONAL DETERMINATION FORM  
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

**SECTION I: BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD):**

November 29, 2010

**B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESWF-PER-R,**

International Isotopes Fluorine Products Facility

**C. PROJECT LOCATION AND BACKGROUND INFORMATION: #####**

State: New Mexico County/parish/borough: Lea City: 10 Miles west of Hobbs  
Center coordinates of site (lat/long in degree decimal format): Lat. 32.72582° N, Long. -103.35087° W.  
Universal Transverse Mercator: 3,622,095 N, 654,538 E, (NAD 83, Zone 13)

Name of nearest waterbody: Monument Draw

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: NA

Name of watershed or Hydrologic Unit Code (HUC): 12080003

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

**D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

Office (Desk) Determination. Date: November 29, 2010

Field Determination. Date(s): October 16, 2010

**SECTION II: SUMMARY OF FINDINGS**

**A. RHA SECTION 10 DETERMINATION OF JURISDICTION.**

There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.  
Explain:

**B. CWA SECTION 404 DETERMINATION OF JURISDICTION.**

There Are no "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

**1. Waters of the U.S.**

**a. Indicate presence of waters of U.S. in review area (check all that apply):<sup>1</sup>**

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters<sup>2</sup> (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
- Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

**b. Identify (estimate) size of waters of the U.S. in the review area:**

Non-wetland waters: linear feet: width (ft) and/or NA acres.

Wetlands: NA acres.

**c. Limits (boundaries) of jurisdiction based on: Pick List**

<sup>1</sup> Boxes checked below shall be supported by completing the appropriate sections in Section III below.

<sup>2</sup> For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Elevation of established OHWM (if known):

2. **Non-regulated waters/wetlands (check if applicable):**<sup>3</sup>

- Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

Two small intermittent drainages are located on the southwest quadrant of Section 27 (Map 2). Base flow conditions were not observed within the drainages during an October 23, 2010 site visit. Surface flows most likely occur in response to precipitation events. The drainages grade to the southeast and coalesce approximately 1,300 ft south of the section boundary. The western drainage is clearly defined on Section 27 due to a moderately incised channel and the presence of Honey Mesquite (*Prosopis glandulosa*) bushes along the banks. The drainage to the east is shallow and not easily delineated from the surrounding land surface.

The coalesced drainage continues to grade to the south / southeast toward Monument Draw. Monument Draw is a major surface drainage feature in southern Lea County and is clearly present in topographical maps approximately 14 miles southeast of the section boundary. Although the drainage present in Section 27 grade toward Monument Draw, a review of topographic maps did not reveal a clear physical connection to Monument Draw. The drainage terminates in a playa approximately 8 miles southeast of the section (Map 3).

Small surface depressions are located throughout Section 27. Several of the most substantial depressions are identified on Map 2. The depressions tend to be circular in shape and range from 50 ft to 300 ft in diameter and 3 ft to 5 ft in depth below the surrounding grade. Several of the larger depressions have been identified on Map 2. The depressions occasionally fill with water in response to precipitation events. The depressions were dry during the October 23, 2010 site visit. The frequency and duration of surface water in the depressions is unknown; however, it is likely that water or saturated conditions are present for less than 10% of the year.

A change from the surrounding vegetation community occurs within the surface depressions. Vegetation within the depressions is dominated by the perennial grasses Burro grass (*Scleropogon brevifolius*) and Galleta Grass (*Pleuraphis jamesii*). Neither plant species are included in the National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. Vine Mesquite (*Panicum obtusum*), Western wheatgrass (*Pascoyrum smithii*), and Blueweed (*Helianthus ciliaris*) were present at low densities (<5% of areal herbaceous cover). Each of these three species are described as either FAC or FAC- in the National List.

A soil core was collected from two of the deeper depressions on Section 27. Each of the cores was approximately 16 inches in depth. The soil consisted of dark brown sandy to silty loam with some organic matter. No mottling or sulfidic material was observed in the cores.

It is the opinion of GL Environmental, Inc. that waters of the U.S are not present in Section 27. Surface drainage flows are infrequent, low volume and short in duration. Additionally, the drainage is not connected through surface channels to regional surface water features. Surface depressions are not dominated by wetland plants, lack indicators of anoxic soil conditions, and most likely are not saturated for more than 10% of the year. The surface depressions lack the characteristics of a wetlands as defined in the Corps of Engineers Wetlands Delineation Manual, January 1987. GL Environmental, Inc. seeks concurrence from the USACE that any water features on Section 27 are isolated and "Waters of the U.S." are not present within Section 27.

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<sup>3</sup> Supporting documentation is presented in Section III.F.

**SECTION III: CWA ANALYSIS**

**A. TNWs AND WETLANDS ADJACENT TO TNWs**

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

- 1. TNW  
Identify TNW: NA.

Summarize rationale supporting determination:

- 2. Wetland adjacent to TNW  
Summarize rationale supporting conclusion that wetland is "adjacent": NA.

**B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):**

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody<sup>4</sup> is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

**1. Characteristics of non-TNWs that flow directly or indirectly into TNW**

**(i) General Area Conditions:**

Watershed size: **Pick List**  
Drainage area: **Pick List**  
Average annual rainfall: 14.6 inches  
Average annual snowfall: 5 inches

**(ii) Physical Characteristics:**

**(a) Relationship with TNW:**

- Tributary flows directly into TNW.
- Tributary flows through **Pick List** tributaries before entering TNW.

Project waters are **Pick List** river miles from TNW.  
Project waters are **Pick List** river miles from RPW.  
Project waters are **Pick List** aerial (straight) miles from TNW.  
Project waters are **Pick List** aerial (straight) miles from RPW.  
Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW<sup>5</sup>:  
Tributary stream order, if known:

<sup>4</sup> Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

<sup>5</sup> Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is:  Natural  
 Artificial (man-made). Explain:  
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: feet  
Average depth: feet  
Average side slopes: Pick List.

Primary tributary substrate composition (check all that apply):

Silts  Sands  Concrete  
 Cobbles  Gravel  Muck  
 Bedrock  Vegetation. Type/% cover:  
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: Pick List

Tributary gradient (approximate average slope): %

(c) Flow:

Tributary provides for: Intermittent but not seasonal flow

Estimate average number of flow events in review area/year: Pick List

Describe flow regime:

Other information on duration and volume:

Surface flow is: Pick List. Characteristics:

Subsurface flow: Pick List. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks  
 OHWM<sup>6</sup> (check all indicators that apply):  
 clear, natural line impressed on the bank  the presence of litter and debris  
 changes in the character of soil  destruction of terrestrial vegetation  
 shelving  the presence of wrack line  
 vegetation matted down, bent, or absent  sediment sorting  
 leaf litter disturbed or washed away  scour  
 sediment deposition  multiple observed or predicted flow events  
 water staining  abrupt change in plant community  
 other (list):  
 Discontinuous OHWM.<sup>7</sup> Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by:  Mean High Water Mark indicated by:  
 oil or scum line along shore objects  survey to available datum;  
 fine shell or debris deposits (foreshore)  physical markings;  
 physical markings/characteristics  vegetation lines/changes in vegetation types.  
 tidal gauges  
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

<sup>6</sup>A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

<sup>7</sup>Ibid.

(iv) **Biological Characteristics. Channel supports (check all that apply):**

- Riparian corridor. Characteristics (type, average width):
- Wetland fringe. Characteristics:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

2. **Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW**

(i) **Physical Characteristics:**

(a) General Wetland Characteristics:

Properties:

Wetland size:        acres

Wetland type. Explain:

Wetland quality. Explain:

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **No Flow**. Explain:

Surface flow is: **Pick List**

Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

Directly abutting

Not directly abutting

Discrete wetland hydrologic connection. Explain:

Ecological connection. Explain:

Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List**.

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) **Chemical Characteristics:**

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain:

Identify specific pollutants, if known:

(iii) **Biological Characteristics. Wetland supports (check all that apply):**

- Riparian buffer. Characteristics (type, average width):
- Vegetation type/percent cover. Explain:
- Habitat for:
  - Federally Listed species. Explain findings:
  - Fish/spawn areas. Explain findings:
  - Other environmentally-sensitive species. Explain findings:
  - Aquatic/wildlife diversity. Explain findings:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately (        ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)      Size (in acres)      Directly abuts? (Y/N)      Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

### C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the *Instructional Guidebook*. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

**Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:**

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

### D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:  
 TNWs: linear feet width (ft), Or,      acres.  
 Wetlands adjacent to TNWs:      acres.
2. **RPWs that flow directly or indirectly into TNWs.**  
 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:  
 Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters:

**3. Non-RPWs<sup>8</sup> that flow directly or indirectly into TNWs.**

- Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):

- Tributary waters: linear feet width (ft).  
 Other non-wetland waters: acres.  
Identify type(s) of waters:

**4. Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.  
 Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:  
  
 Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

**5. Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

- Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

**6. Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**

- Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

**7. Impoundments of jurisdictional waters.<sup>9</sup>**

As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.

- Demonstrate that impoundment was created from "waters of the U.S.," or  
 Demonstrate that water meets the criteria for one of the categories presented above (1-6), or  
 Demonstrate that water is isolated with a nexus to commerce (see E below).

**E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):<sup>10</sup>**

- which are or could be used by interstate or foreign travelers for recreational or other purposes.  
 from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.  
 which are or could be used for industrial purposes by industries in interstate commerce.  
 Interstate isolated waters. Explain:  
 Other factors. Explain:

**Identify water body and summarize rationale supporting determination:**

<sup>8</sup>See Footnote # 3.

<sup>9</sup>To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

<sup>10</sup>Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
- Other non-wetland waters: acres.  
Identify type(s) of waters:
- Wetlands: acres.

**F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):**

- If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:
- Other: (explain, if not covered above):

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- Lakes/ponds: acres.
- Other non-wetland waters: acres. List type of aquatic resource:
- Wetlands: acres.

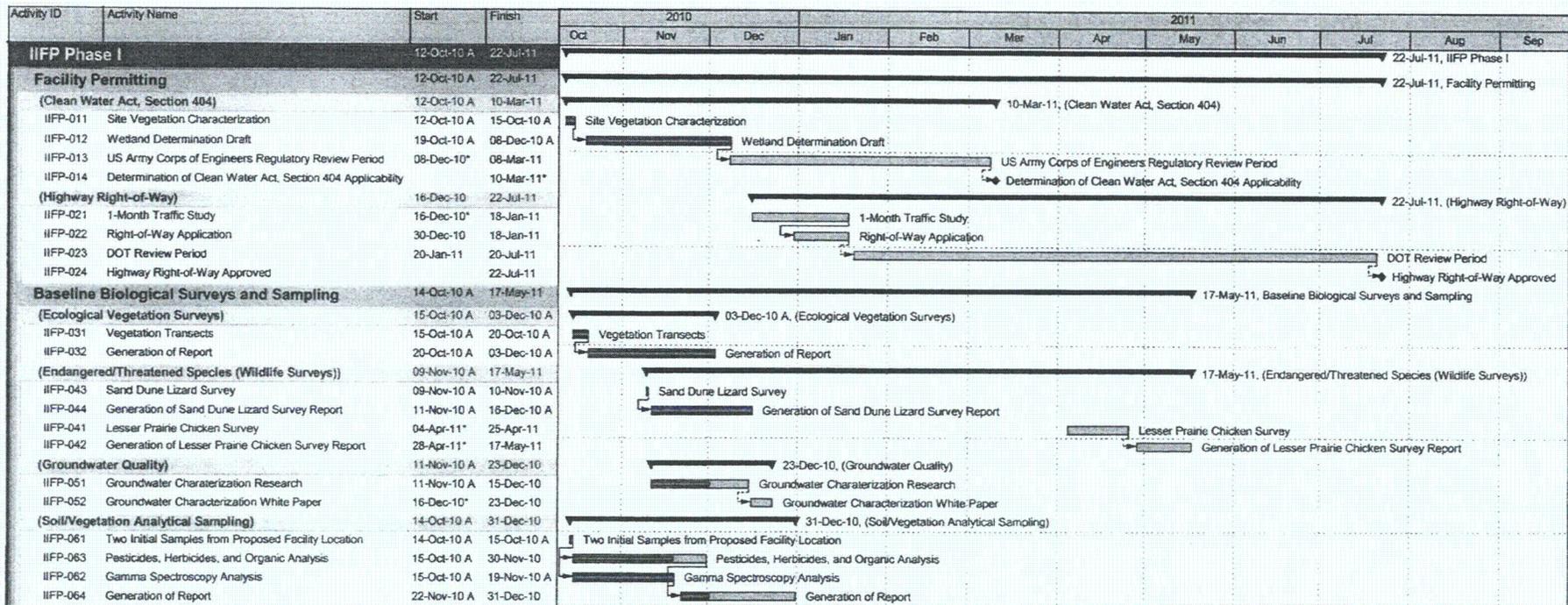
**SECTION IV: DATA SOURCES.**

**A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):**

- Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Maps 1-3.
- Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - Office concurs with data sheets/delineation report.
  - Office does not concur with data sheets/delineation report.
- Data sheets prepared by the Corps:
- Corps navigable waters' study:
- U.S. Geological Survey Hydrologic Atlas:
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Monument North 7.5 min Quadrangel Map, Hobbs Southwest 7.5 Min Quadrangel Map.
- USDA Natural Resources Conservation Service Soil Survey. Citation:
- National wetlands inventory map(s). Cite name:
- State/Local wetland inventory map(s):
- FEMA/FIRM maps:
- 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Monument North 2009 NE, NW, , Hobbs Southwest 7.5 Min Quadrangel Map.  
or  Other (Name & Date):
- Previous determination(s). File no. and date of response letter:
- Applicable/supporting case law:
- Applicable/supporting scientific literature:
- Other information (please specify):

**B. ADDITIONAL COMMENTS TO SUPPORT JD:** It is the opinion of GL Environmental, Inc. that waters of the U.S are not present in Section 27. Surface drainage flows are infrequent, low volume and short in duration. Additionally, the drainage is not connected through surface channels to regional surface water features. Surface depressions are not dominated by wetland plants, lack indicators of anoxic soil

conditions, and most likely are not saturated for more than 10% of the year. GL Environmental, Inc. seeks concurrence from the USACE that any water features on Section 27 are isolated and "Waters of the U.S." are not present within Section 27..



Actual Work   
 Critical Remaining Work   
 % Complete  
 Remaining Work   
 Milestone   
▶ Summary

Activity ID	Activity Name	Start	Finish	2011												2012												2013	
				Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb						
<b>IIFP Phase II</b>																													
<b>Facility Permitting</b>																													
<b>(NMED Air Quality: New Source Review/Authority to Construct Permit)</b>																													
IIFP-071	Equipment List Review (Manufacturer and Model)	01-Jul-11	01-Sep-11																										
IIFP-072	Petroleum Storage Tanks Spec Review (Size, Design Specs, Fuel Type, Annual Vol.)	01-Jul-11	01-Sep-11																										
IIFP-073	Emission Calculations	01-Jul-11	01-Sep-11																										
IIFP-074	Facility Design Layout Review	01-Jul-11	01-Sep-11																										
IIFP-075	Air Dispersion Modeling on EPA Approved Software	01-Jul-11	01-Sep-11																										
IIFP-076	Air Quality Permit Application Submittal	01-Jul-11	01-Sep-11																										
IIFP-077	Public Notice	01-Sep-11	30-Dec-11																										
IIFP-078	Regulatory Review Period	01-Sep-11	30-Dec-11																										
IIFP-079	Permit Approval	02-Jan-12	02-Jan-12																										
<b>(NMED Groundwater Quality: Groundwater Discharge Permit/Liquid Waste Permit)</b>																													
IIFP-0801	Facility Design Review (Layout, Pond Designs, Effluent Piping, and Site Drainage)	29-Sep-11	30-Nov-11																										
IIFP-0802	Stormwater Discharge Rate Calculations	30-Sep-11	01-Dec-11																										
IIFP-0803	Effluent Discharge Rate Calculations	30-Sep-11	30-Nov-11																										
IIFP-0804	Effluent Quality Determination/Estimation	30-Sep-11	30-Nov-11																										
IIFP-0805	Effluent Processing, Treatment, Storage, and Disposal Plans	30-Sep-11	01-Dec-11																										
IIFP-0806	P.E. Stamped Water Balance Calculations	30-Sep-11	01-Dec-11																										
IIFP-0807	Determination of Baseline Conditions (Hydrology, Groundwater Quality, Soils, Geology)	30-Sep-11	01-Dec-11																										
IIFP-0808	Domestic Waste Land Apply Strategy	30-Sep-11	01-Dec-11																										
IIFP-0809	Monitoring Plan (Groundwater, Soil)	30-Sep-11	01-Dec-11																										
IIFP-0810	Contingency Plan	30-Sep-11	01-Dec-11																										
IIFP-0811	Groundwater Discharge Permt Application Submittal		01-Dec-11																										
IIFP-0812	Public Notice	01-Dec-11	02-Apr-12																										
IIFP-0813	Regulatory Review Period	01-Dec-11	02-Apr-12																										
IIFP-0814	Permit Approval		02-Apr-12																										
<b>(NMED Drinking Water: Drinking Water System Permit)</b>																													
IIFP-091	Monitoring/Disinfection Plan Generation	23-Nov-11	14-Dec-11																										
IIFP-092	Drinking Water System Design/Application	23-Nov-11	14-Dec-11																										
IIFP-093	Regulatory Review Period	15-Dec-11	15-Mar-12																										
IIFP-094	Permit Approval		15-Mar-12																										
IIFP-095	NMED Sanitary Survey	16-Mar-12	02-Apr-12																										
IIFP-096	Operator Certification	23-Nov-11	02-Apr-12																										
<b>(NMED Radiation Protection: Radiation Protection Permit)</b>																													
IIFP-101	List/Description/Inspection of All Radiological Source Equipment	14-Feb-12	29-Feb-12																										
IIFP-102	Permit Application Submittal		01-Mar-12																										
IIFP-103	Regulatory Review Period	02-Mar-12	02-Apr-12																										
IIFP-104	Permit Approval(s)		02-Apr-12																										
<b>(NMED Hazardous Waste: Hazardous Waste Generator/Generator Number)</b>																													
IIFP-111	Determination of Generator Status	16-Feb-12	29-Feb-12																										
IIFP-112	Application Submittal		29-Feb-12																										
IIFP-113	Regulatory Review Period	02-Mar-12	02-Apr-12																										
IIFP-114	Status Approval		02-Apr-12																										

Actual Work   
 Critical Remaining Work   
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 Remaining Work   
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 Summary

Activity ID	Activity Name	Start	Finish	2012																
				Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
<b>(NMED Petroleum Storage Tank: Above Ground Storage Tank Registration)</b>				02-Dec-11, (NMED Petroleum Storage Tank: Above Ground Storage Tank Registration)																
IIFP-121	Petroleum Storage Tanks Spec Review (Size, Design, Fuel Type, Etc.)	17-Oct-11	31-Oct-11	Petroleum Storage Tanks Spec Review (Size, Design, Fuel Type, Etc.)																
IIFP-122	Application Preparation	17-Oct-11	31-Oct-11	Application Preparation																
IIFP-123	Application Submittal		01-Nov-11	Application Submittal																
IIFP-124	Regulatory Review Period	01-Nov-11	01-Dec-11	Regulatory Review Period																
IIFP-125	Permit Approval(s)		02-Dec-11	Permit Approval(s)																
<b>(EPA National Pollution Discharge Elimination System NOI and SWPPP)</b>				03-Oct-11, (EPA National Pollution Discharge Elimination System NOI and SWPPP)																
IIFP-131	Review of Facility Design Layout (Footprint)	25-Aug-11	01-Sep-11	Review of Facility Design Layout (Footprint)																
IIFP-132	Surface Water Flow Diagram	25-Aug-11	01-Sep-11	Surface Water Flow Diagram																
IIFP-133	Best Management Practices Determination	25-Aug-11	01-Sep-11	Best Management Practices Determination																
IIFP-134	Receiving Waters Determination	25-Aug-11	01-Sep-11	Receiving Waters Determination																
IIFP-135	Generating Stormwater Pollution Prevention Plan (SWPPP)	25-Aug-11	01-Sep-11	Generating Stormwater Pollution Prevention Plan (SWPPP)																
IIFP-136	Submittal of NPDES Notice of Intent (NOI)		01-Sep-11	Submittal of NPDES Notice of Intent (NOI)																
IIFP-137	NOI Regulatory Review Period	01-Sep-11	03-Oct-11	NOI Regulatory Review Period																
IIFP-138	NOI Approval		03-Oct-11	NOI Approval																
<b>Baseline for REMP</b>				11-Jan-12																
<b>(REMP Monitoring Equipment Installation)</b>				11-Jan-12, (REMP Monitoring Equipment Installation)																
IIFP-141	Locate Settings and Install Four (4) NMED-Approved Background Monitoring Wells	28-Oct-11	11-Jan-12	Locate Settings and Install Four (4) NMED-Approved Background Monitoring Wells																
IIFP-142	Locate Settings and Install Six (6) Airborne-Particulate Monitoring Systems	28-Oct-11	11-Jan-12	Locate Settings and Install Six (6) Airborne-Particulate Monitoring Systems																
IIFP-143	Locate Settings for Eight (8) Thermoluminescent Dosimeters (TLDs)	28-Oct-11	11-Jan-12	Locate Settings for Eight (8) Thermoluminescent Dosimeters (TLDs)																
IIFP-144	Locate Settings for Four (4) On-Site and One (1) Off-Site Soil and Vegetation Sample Locations	28-Oct-11	11-Jan-12	Locate Settings for Four (4) On-Site and One (1) Off-Site Soil and Vegetation Sample Locations																
<b>(REMP Initial Baseline Sampling/Analysis)</b>				11-Jan-12																
IIFP-151	Deploy/Retrieval/Analyses/Reporting for Eight (8) TLDs	11-Jan-12	11-Jan-13	Deploy/Retrieval/Analyses/Reporting for Eight (8) TLDs																
IIFP-152	Sampling/Analyses/Reporting for Four (4) On-Site and One (1) Off-Site Soil and Vegetation Locations	11-Jan-12	11-Jan-13	Sampling/Analyses/Reporting for Four (4) On-Site and One (1) Off-Site Soil and Vegetation Locations																
IIFP-153	Sampling/Analyses/Reporting for Two (2) Stormwater/Sediment Locations (in Retention Basins)	11-Jan-12	11-Jan-13	Sampling/Analyses/Reporting for Two (2) Stormwater/Sediment Locations (in Retention Basins)																
IIFP-154	Sampling/Analyses/Reporting for Six (6) Airborne-Particulate Monitoring Systems	11-Jan-12	11-Jan-13	Sampling/Analyses/Reporting for Six (6) Airborne-Particulate Monitoring Systems																
IIFP-155	Sampling/Analyses/Reporting for Four (4) Groundwater Monitoring Wells	11-Jan-12	10-Jan-13	Sampling/Analyses/Reporting for Four (4) Groundwater Monitoring Wells																

Actual Work   
 Critical Remaining Work   
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 Remaining Work   
 Milestone   
 Summary

Activity ID	Activity Name	Start	Finish
<b>IIFP Phase II</b>		27-Oct-10	30-Dec-11
<b>Recommendations</b>		27-Oct-10	30-Dec-11
IIFP-161	Initial Plan for Groundwater Monitoring Submittal to the NMED Groundwater Quality Bureau	27-Oct-10	30-Dec-11
IIFP-162	Review of Oil Conservation Division/NMED Records to Determine if Groundwater Contamination Has Occurred in the Vicinity	27-Oct-10	30-Dec-11
<b>IIFP Phase III</b>		27-Oct-10	30-Dec-11
<b>Recommendations</b>		27-Oct-10	30-Dec-11
IIFP-171	Establish Quality Assurance Program for the Environmental Monitoring Program	27-Oct-10	30-Dec-11
IIFP-172	Establish Attainable Minimal Detectable Activities in the Environmental Report	27-Oct-10	30-Dec-11