

CONTINGENCY PLAN / RESPONSE PROCEDURES FOR AN UNPLANNED PROCESS WATER RELEASE

FROM THE PINEY POINT PHOSPHATES
PHOSPHOGYPSUM STACK SYSTEM

PREPARED BY:



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Note:

This document is the Contingency Plan
for the Piney Point Phosphates, Inc.
gypsum stack system being managed
by Louis Timchak, Jr., Receiver, as
required by Rule 62-672.850 of the
Florida Administrative Code.

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Note: This separate, free-standing report is entitled: “Calendar Year 2002 Emergency Operations and Water Management Plan” and is dated August 28, 2002. It is referred to throughout this Plan as the Ardaman O&M Plan. Copies are maintained onsite.

The report addresses:

1. Overview of Phosphogypsum Stack System
2. Operation of Treated Water and Non-Process Water Ponds
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CONTINGENCY PLAN DISTRIBUTION LIST

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SECTION I – PLAN INTRODUCTION

This contingency plan has been prepared to guide the actions of responsible personnel in the event of an unplanned or uncontrolled release of acidic process water from the phosphogypsum stack system at the former Piney Point Phosphates, Inc. (PPPI or Piney Point) facility. The plan is formatted based upon the structure of the National Interagency Incident Management System-Incident Command System (NIIMS-ICS), which is the system specified to be implemented for phosphogypsum stack systems by Rule 62-672.850 of the Florida Administrative Code (F.A.C.). Accordingly, this plan is an integrated contingency plan (ICP) and is the only emergency response document for the Piney Point gypsum stack system that needs to be referred to in the event of an unplanned or uncontrolled release of acidic process water.

PART 1. PURPOSE AND SCOPE OF PLAN COVERAGE

Sub-Part (a) = Purpose: Prior to 2000, PPPI operated a fertilizer manufacturing complex at a location along U.S. Highway 41 (U.S. 41) approximately six miles north of the city of Palmetto in Manatee County as shown on *Map 1*. The complex consisted of: (1) a sulfuric acid plant with associated molten sulfur storage tanks; (2) a phosphoric acid plant with an associated phosphogypsum stack system; (3) an ammoniated phosphate fertilizer plant with storage of ammonia, phosphoric acid, and dry products; and (4) the infrastructure necessary to support these operations.

The gypsum stack system, which contains over 600 million gallons of ponded acidic process water (e.g., pH $\pm$ 3.0 s.u.) in two above-grade gypsum stacks and two above-grade cooling ponds, constitutes a risk of an unplanned release due to the potential for: (1) overtopping of dikes constructed to various elevations; (2) retaining dike failure; (3) electrical power failure; and/or (4) mechanical pump or pipeline failure. Thus, the principal purpose of this plan is to describe the procedures to be implemented in the event of a release of process water. *Map 2* illustrates the gypsum stack system at Piney Point.

In February 2001, PPPI filed a petition for protection from creditors in the U.S. Bankruptcy Court in Tampa, Florida. At the time of filing, PPPI notified the Florida

Department of Environmental Protection (FDEP or the Department) that PPPI was financially incapable of maintaining the Piney Point gypsum stack system to prevent a release of untreated, acidic process water. The Department initially assumed control of the Piney Point gypsum stack system under its emergency response authority and subsequently, through an action in the Circuit Court of Manatee County, had Louis J. Timchak, Jr. appointed as Receiver of the Piney Point gypsum stack system. Mr. Timchak does not have responsibility for maintaining the remnant production facilities nor is considered by the Department to be an owner or operator of the gypsum stack system, but is authorized to utilize the remnant product facilities as necessary to maintain the gypsum stack system. Maintenance of the Piney Point gypsum stack system to prevent a release of untreated, acidic process water is the Receiver's principal responsibility.

The Receiver selected an onsite program manager, the Shaw Environmental & Infrastructure, Inc. (Shaw); a third-party geotechnical engineer, Ardaman & Associates, Inc. (Ardaman); legal counsel, Fowler-White; and an environmental consultant, Environmental Consulting & Technology, Inc. (ECT), to assist in the maintenance of the Piney Point gypsum stack system. The Receiver instructed, Ardaman and ECT to prepare: (1) a Water Management/Operation Plan (O&M Plan) to guide the operation of the Piney Point gypsum stack system in a manner which minimizes the risk of an unplanned or uncontrolled release of process water; and (2) this Contingency Plan to describe the response actions that would be taken by the Receiver's team in the event of such a release.

Sub-Part (b) = Scope of Plan: The scope of this Contingency Plan is twofold. The Core Plan presented in Section II, together with the detailed procedures presented in Annex 3, describe response procedures in the event of: (1) an unplanned or uncontrolled release of process water from the Piney Point gypsum stack system; and/or (2) an unplanned or uncontrolled release of fuels stored in the Piney Point above-grade petroleum product tanks used by Shaw for their mobile equipment and vehicles.

The need to maintain up-to-date emergency response procedures for the acidic process water stored above-grade within the gypsum stacks and the process water ponds is obvious and is required by the Court Order. Thus, the principal focus of this Plan is to address releases of process water.

The need for procedures to respond to a release of the fuels, lubricants, and other hazardous substances present onsite is based upon the quantities present, their location, and the potential adverse _____ impact of such a release.

Fuels, lubricants, and other hazardous substances are stored at the locations shown on **Map 2**. Uncontrolled releases from these locations will flow into roadside ditches located throughout the plant battery limits. The Receiver has tasked Shaw with the responsibility of cleaning the former plant site such that runoff can be discharged through Outfall 002 (see Map 2). Thus, any releases of fuels, lubricants or other hazardous substances have the potential to flow offsite. Obviously, releases of petroleum products or chemicals also will result in at least localized soil contamination and could result in ground water contamination.

This Plan has been prepared to conform with the requirements of applicable federal and state laws pertaining to emergency situations. Specifically, the following regulations have been reviewed prior to and during preparation of the Plan:

- (i) Federal Occupational Safety & Health Administration:
 - 29 CFR 1910.38 = Employee Emergency Plans
 - 29 CFR 1910.120(q) = Hazardous Waste Operations and Emergency Response
- (ii) U.S. Environmental Protection Agency:
 - 40 CFR 302 = Notification of Reportable Quantity Releases
- (iii) Florida Department of Environmental Protection:
 - Rule 62-672.850, F.A.C. –
 - Phosphogypsum Stack System Contingency Plans

Sub-Part (c) = Description of General Area: The Piney Point complex is located on approximately 670 acres of land adjacent to and east of U.S. 41 in Sections 5 through 8, Township 33 south, Range 18 east. As shown on *Map 1*, the western boundary of the site is U.S. 41 and the southern boundary of the site is Buckeye Road. Natural land surface elevations in the vicinity of the Piney Point facility range from 25 feet (ft) along the northern and eastern property boundaries to less than 10 ft within the plant site area.

Land use to the west of the Piney Point site across U.S. 41 is predominately commercial and industrial. The Manatee County jail/stockade and a Florida Department of Environmental Protection fish hatchery are located northwest of the site across U.S. 41 and Port Manatee is located due west of the plant. Land use on the east side of U.S. 41 is predominately agricultural with several borrow pits located across Buckeye Road. The vast majority of the agricultural lands have been converted into irrigated citrus production or row crop/pasture/sod production.

The Piney Point site lies within the Piney Point Creek and Buckeye Roadside ditch drainage basins. Piney Point Creek drains into Tampa Bay in Hillsborough County immediately south of Cockroach Bay. The Buckeye Road ditch drains into another man-made ditch that parallels the CSX Transportation, Inc. railroad and thence into Bishop Harbor (see *Map 1*). The combination of extensive land clearing, significant topographic relief, and constrictions at culverts beneath U.S. 41 produces localized flooding of the Piney Point site about every 10 years. In essence, U.S. 41 forms a dam along the western property boundary. Flooding historically has caused numerous operational and process water management problems. The relevance of onsite flooding is the potential for floodwaters to overtop the seepage ditches, thereby unnecessarily adding to the process water inventory and increasing the need to contain process water.

Pertinent information about the PPPI property and the general area is as follows:

PPPI Property:

Access:

- The site is accessible from U.S. 41 from both the north and west.

- The principal access is via a private 2-lane paved road located 3.36 miles north of the junction of Interstate 275 (I-275) and U.S. 41.
- The north secondary entrance road is a private 2-lane paved road with a locked gate located 0.62 mile south of the Hillsborough County line on U.S. 41 at a CSX railroad crossing.
- ***Map 3 is an onsite road map.***

Location:

- UTM = Zone 17 – 348.5 km east and 3057.3 km north.
- Latitude = 29° 23' 00" north and Longitude = 82° 20' 00" west.

Topography and Drainage:

- The topography falls from >20 ft (NGVD) on the east property boundary to <10 ft along the U.S. 41 western boundary (see Map 4).
- Along U.S. 41, the land elevation falls from $\pm$ 12 ft at the northern boundary to $\pm$ 8 ft at the southwestern property corner at the Buckeye Road intersection (see Map 4).
- The northern half of the site drains to the north beneath U.S. 41 into Piney Point Creek and then into the Cockroach Bay aquatic preserve/Outstanding Florida Water (OFW).
- The southern half of the site drains into the Buckeye Road ditch, which drains into a CSX railroad ditch, then into Bishop Harbor, which is part of the Terra Ceia aquatic preserve/OFW.
- ***U.S. 41 acts as a dike and the culverts at Piney Point Creek and the Buckeye Road ditch are undersized, thereby resulting in periodic onsite flooding.***

Sensitive Receptors:

Airborne: Northwest, west, and southwest.

Waterborne: All receiving waters, Cockroach Bay and Bishop Harbor, are OFWs.

Ecology: The entire site is developed such that no native ecosystems are present onsite.

Ground Water:

- The surficial aquifer generally flows to the coast and follows the topographic gradient, except in the vicinity of the cooling water ponds and the gypsum stacks where the above-grade process water levels and seepage collection ditches artificially influence the levels and directions of ground water flow.
- Ground water quality in the water table aquifer in the vicinity of the former plant site, the cooling ponds, and gypsum stacks potentially is impacted.
- Ground water quality in the deeper intermediate and Floridan aquifer systems is not likely to have been impacted.

Surface Water:

- *Map 4* illustrates the onsite drainage patterns.
- All lakes or ponds onsite are man-made.
- All of the site drains into OFWs.

Water Supply:

- Potable water is provided by Manatee County Utilities.
- Two onsite Floridan aquifer wells are capable of producing over 2 million gallons per day (MGD) of mineralized, but unimpacted ground water.
- The plant potable water system is suitable for all uses, including eye wash and personal hygiene.

General Area Features:

- *Nearest emergency care is at Manatee Memorial Hospital in Bradenton, which is shown on Map 1-take U.S. 41 south to State Road 64....approximately 9.8 miles south of the site. General Information = (941) 746-5111. Emergencies: (941) 745-7466.*
- *Area served by 911 Emergency Services (Manatee County).*
- *Fire protection service provided by North River Volunteer Fire District (911).*
- *Security protection service provided by Manatee County sheriff (911).*

Sub-Part (d) = Overview of Facilities: PPPI was a granular phosphate fertilizer manufacturing complex. The facility consisted of several processes that converted insoluble rock containing phosphorus into a soluble form suitable for agricultural use. If one were to break down the operation into logical segments, the following activities were undertaken to produce fertilizer with phosphorus and nitrogen values:

1. Wet phosphate rock delivered by railcar or truck was unloaded, conveyed to storage, and ground by rotary ball mills.
2. Molten sulfur was burned under controlled stoichiometry to produce sulfuric acid.
3. Ground phosphate rock was acidulated with sulfuric acid, producing wet process phosphoric acid and byproduct calcium sulfate (gypsum) with releases of fluoride compounds, including hydrogen fluoride.
4. The phosphoric acid that was approximately 30 percent phosphorus (by weight expressed as P_2O_5) was sent to evaporators for concentration to approximately 46 percent strength acid.
5. Granulated fertilizers were produced by combining phosphoric acid and ammonia in various mole ratios to produce monoammonium phosphate (MAP) or diammonium phosphate (DAP).
6. Granulated products were conveyed to dry storage by trip conveyor, dropped to storage piles inside warehouses, and taken by payloader as needed to a hopper and elevator system to weigh/storage bins for top-loading of railcars or trucks.

Gypsum Stack System:

As shown on *Map 2*, the gypsum stack system occupies essentially two-thirds of the Piney Point property except for the land along U.S. 41 and the plant site. The principal features are labeled on *Map 2* and consist of:

- (i) The old gypsum stack—this is the original stack that was constructed in the 1960s and utilized exclusively until the 1980s. The old gypsum stack is approximately 120 acres in size and the crest of the retaining dike is currently graded to 85 feet National Geodetic Vertical Datum of 1929

(NGVD). The old gypsum stack has value to the Receiver as a source of gypsum for the purpose of maintaining the gypsum stack dikes and to store captured process water and storm water runoff. The volume of water that can be stored, according to Ardaman, is approximately 775 acre-ft, or 252 million gallons.

- (ii) The new gypsum stack—the new gypsum stack was constructed in 1980 and was utilized until the plant shutdown. According to ex-PPPI employees, the design capacity would not be reached for another 20-plus years if the plant continued to operate. The outer dike elevation is currently graded to 64 ft NGVD. Because gypsum stacks are filled from the outside to the inside, the water depths in the center of the south compartment exceed 25 ft, according to Ardaman. The volume of water that physically can be stored, according to Ardaman, is about 1,000 acre-ft, or 328 million gallons. However, due to the dike stability concerns, Ardaman has recommended storing no more than 885 ac-ft, or 288 million gallons.
- (iii) The cooling pond system—there are two cooling ponds used to store the recirculating process water and captured storm water runoff. The two ponds occupy a total ponded area of about 80 acres. Each cooling pond was operated to provide cooling water for specific production facilities. The south cooling pond (SCP) provided cooling water for the phosphoric acid plant whereas the DAP pond was dedicated to the granular fertilizer manufacturing plant. However, since the PPPI complex ceased production in 1999, all process water systems have been integrated to provide maximum storage capacity. Water quality sampling in August 2001 demonstrated similar characteristics in all ponded areas.

According to Ardaman, the physical storage capacity of the two cooling ponds is about 553 acre-ft, or about 180 million gallons. However, due to the dike stability concerns, Ardaman has recommended that water levels in the SCP remain below 17.0 ft NGVD instead of 18.2 ft NGVD. This

recommendation reduces available storage capacity by about 68 acre-ft, which results in an effective normal capacity of 485 acre-ft in the two cooling ponds. Additional “emergency storage” capacity beyond this 485 acre-ft can be utilized in the event of extremely heavy rainfall. The Ardaman O&M Plan should be consulted in this event.

- (iv) The process water recirculation system—Because the process water and captured storm water runoff is stored above-grade at various elevations, it is necessary to recirculate this water using pumps to maintain the water levels in the seepage collection ditches. *Map 2* illustrates the locations of the pumps used to manage the inventory of water onsite. Operation of the system by Shaw, on the Receiver’s behalf, is as follows:

The water levels in both the new and old gypsum stacks typically are maintained 2.5 ft or more below the lowest elevation of the outer gypsum dike. In the water management plan, Ardaman states that the maximum water level elevations shall be maintained at least 1.0 foot below the crest of the gypsum dikes during emergency conditions. These elevations are shown in Table 1.

Table 1. Relevant Elevations of the Piney Point Gypsum Stack System

Containment Area	Top of Dike (NGVD)	Normal Pool Elevation	Maximum Emergency Elevation
Old gypsum stack-north	85.0	84.0	84.0
Old gypsum stack-south	85.0	84.0	84.0
New gypsum stack-north	64.0	62.0	63.0
New gypsum stack-south	64.0	62.0	63.0
DAP pond	22.9	19.0	19.0
South cooling pond-north	22.6	17.0	18.2
South cooling pond-south	22.6	17.0	18.2

Process water can be decanted/drained from the top of the old gypsum stack through the use of adjustable weir structures present in each compartment that drain into a buried concrete outlet pipe that flows into a return water canal near the midpoint of the west wall of the stack’s south

compartment (see *Map 2*). Similarly, both compartments of the new gypsum stack have adjustable weir structures that drain into a buried concrete pipe that discharges into the return water canal at its headwaters near the southwest corner of the north compartment of this stack.

The return water canal flows west and south around the old gypsum stack, west to the south cooling pond, north along the south cooling pond east wall, then north back to the plant. Control structures allow water decanted from the two gypsum stacks to be routed to the south cooling pond, to the abandoned processing plant, or to pumps to recirculate the water back to one of the gypsum stack compartments or the DAP pond.

The return water canal and south cooling pond are the low points in the system amongst the integrated above-grade gypsum stack system features, recognizing that the DAP pond is isolated, meaning that process water does not flow by gravity into this storage area. If the capacity to pump process water back to the tops of the gypsums stacks, or into the DAP pond, is not maintained, the water levels in the return canal and/or the south cooling pond ultimately would overtop the retaining dikes.

Three 5,000 gallons per minute (gpm) “pond water” pumps (see *Map 2*) are used to maintain the water levels in the return water canal and the south cooling pond by continuously pumping water to the tops of the gypsum stacks or the DAP pond. The former gypsum distribution pipeline from the phosphoric acid plant is used to transport the recirculated process water.

Storm water runoff and seepage from the two gypsum stacks and the DAP pond are collected in two seepage ditches that encircle this area, along with a buried underdrain system along portions of the east and south walls of the new gypsum stack. The northernmost seepage ditch flows

counterclockwise around the east and north sides of the new gypsum stack and continues flowing westward and southward around the DAP pond and the west wall of the old gypsum stack, and then parallels the water return canal along the east side of the south cooling pond. At its terminus, two 1,100-gpm pumps transfer the collected seepage to the water return canal. If needed, the manually controlled DAP pump can transfer collected seepage into the DAP pond.

The southernmost seepage ditch flows westward parallel to Buckeye Road to the southwest corner of the gypsum stack, where a 200-gpm pump system transfers collected seepage into the south cooling pond. Water in this ditch also can gravity flow into the south cooling pond seepage ditch.

A third seepage ditch encircles the south cooling pond. Seepage captured in this ditch flows counterclockwise to the northeast corner of the cooling pond where a 1,100-gpm pump system transfers water into the south cooling pond.

Unplanned process water releases that escape the phosphogypsum stack system footprint (as generally defined by the three perimeter seepage ditches shown on *Map 2*) eventually will reach the Bishop Harbor or Cockroach Bay OFW waterbodies and then Tampa Bay unless the Shaw team is able to contain the releases onsite. In nearly every theoretical release scenario, the flow of liquids will enter the drainage ditches that parallel Buckeye Road along the south boundary or the rail spur into the plant along the northeast property boundary. As noted previously, U.S. 41 creates a coffer dam along the western boundary of the plant such that the culverts beneath the highway at Buckeye Road and the north plant boundary are the two offsite release points, except in the case of a catastrophic failure of the new gypsum stack, which could overtop

Buckeye Road. *Map 2 illustrates the locations described above whereas Map 4 illustrates the drainage system.*

Electrical service for the recirculation system is provided by the Florida Power & Light substation located southeast of the phosphoric acid plant. This substation provides power to all areas of the plant except for the office and the warehouse. Some of the pumps as well as the wastewater treatment plant (liming station) are on separate meters.

- (v) Process wastewater treatment and discharge infrastructure—This infrastructure consists of a process water treatment system located to the south of the plant complex next to the south cooling pond and a non-process water system that drains unimpacted areas north of the production area.

Ardaman estimates that the Piney Point complex currently contains about 600 million gallons of stored process water and storm water runoff. The characteristics of this water are illustrated on Table 2.

Table 2. Piney Point Process Water Quality Characteristics

Parameter	Process Water
pH ⁽¹⁾	2.9 – 3.1 s.u.
Total dissolved solids ⁽¹⁾	9,600 mg/L
Cadmium ⁽²⁾	0.064 mg/L
Lead ⁽²⁾	0.06 mg/L
Specific conductance ⁽¹⁾	10,000 µmhos/cm
Magnesium ⁽¹⁾	242 mg/L
Sulfate ⁽¹⁾	4,200 mg/L
Fluoride ⁽¹⁾	160 mg/L
Sodium ⁽¹⁾	1,300 mg/L
Total phosphorus ⁽¹⁾	1,200 mg/L
Total nitrogen ⁽¹⁾ (ammoniacal)	490 mg/L
Gross Alpha ⁽¹⁾	49 pCi/L

Notes:

(1) Actual analysis of Piney Point water.

(2) Typical ranges of process water.

Any process wastewater that can not be contained can be treated prior to release by utilizing the following treatment technology. A centrifugal pump transfers the process wastewater to the first stage mixing tank, where lime, or a mixture of lime and limestone, slurry is added and agitated to raise the pH to about 4.5-5.5 s.u. The effluent overflows into the no. 1 clarifier where solids are settled. Overflow from this clarifier is then transferred by centrifugal pump to the second stage mixing tank where lime slurry is added to further raise the pH to above 11.5 s.u. The effluent overflows by gravity into the no. 2 clarifier where solids are settled. Wastewater from the no. 2 clarifier is then transferred to the ammonia removal pond where the wastewater is spray aerated to strip the unionized ammonia. Thereafter, the treated effluent is transferred to the acidulation station where sulfuric acid is added to it. The neutralized wastewater then gravity flows through outfall 003 into the Buckeye Road ditch. The double liming system has a design treatment rate of one million gpd of process wastewater.

The Department has instructed the Receiver that all other feasible options for transferring water offsite must be implemented before double-lime treated discharges will be permitted. These restrictions are due to concerns that releases to Bishop Harbor and Tampa Bay could result in adverse environmental impacts. Use of the double-lime wastewater treatment system and discharges of treated process water are restricted to emergency situations only. The emergency situations when FDEP will authorize an emergency discharge are described in Section 10- of the Ardaman O&M plan.

Sub-Part (e) = Nature of Potential Hazards: *Map 5* is an aerial photograph of the site that has been prepared to illustrate potential hazards to emergency response personnel. These hazards include:

- Contact with onsite acidic process water;

- Contact with onsite lime or high-pH treated water;
- Electrocution by overhead power lines or electrical equipment;
- Steep slopes and/or unstable terrain where slips and falls could occur;
- Fumes from lime treatment and ammonia stripping;
- Traffic accidents onsite;
- Heat stroke;
- Asbestos;
- Snake bites;
- Alligator attacks; and
- Confined spaces.

Due to these risks, public agency or contract emergency response personnel should not enter into the restricted areas shown on Map 5 without a “buddy” who is familiar with the site.

Sub-Part (f) = Nature of Potential Release Events: The Core Contingency Plan presented in Section II addresses a series of potential unplanned or uncontrolled release events. Annex 3 describes these potential events in greater detail. These events include the unplanned or uncontrolled release of:

- Process water from the new or old gypsum stacks;
- Process water from the south or DAP cooling ponds;
- Process water from a broken or ruptured pump or pipeline;
- Gypsum sediment suspended in process water releases from the new or old gypsum stacks;
- Di-electric insulating fluid (mineral oil) from electrical transformers onsite (regardless of ownership);
- Maintenance and/or laboratory chemicals; and/or
- Gasoline or diesel fuel from the aboveground fuel tanks. Note that response procedures have been developed to respond to events, rather than causes. *Map 5 has been prepared to illustrate the locations where such events could occur. Because releases could occur at locations which could isolate or trap*

emergency response personnel, public agency or contract emergency response personnel should not enter any restricted area without a "buddy" who is familiar with the site.

PART 2. TABLE OF CONTENTS/PLAN FORMAT

A Table of Contents was provided on the first five pages of this document. These pages have been written as plainly as possible in order to simplify the use of this Plan.

The content and format of this Plan is consistent with the requirements of Rule 62-672.850, F.A.C. The Plan was prepared to correspond with the format of the "National Response Team's Integrated Contingency Plan Guidance" [61 Federal Register 28641 (June 5, 1996)]. Any differences between the format or content of this Plan and the federal guidance are due to adaptation of the federal guidance to the Piney Point facilities and to improve the usefulness of the Plan to onsite personnel, security guards, and public agency and contract response personnel.

PART 3. CURRENT REVISION DATE

The current revision date is October 2002. This Plan replaces in its entirety the Piney Point Phosphates, Inc. Contingency Plan originally prepared in December 1999 and revised on June 2, 2001 and January 15, 2002.

PART 4. GENERAL FACILITY IDENTIFICATION INFORMATION

- a) *Facility Name:* Piney Point Phosphates, Inc.
- b) *Owner/Operator/Agent:* The Shaw Environmental & Infrastructure, Inc., on behalf of Louis J. Timchak, Jr., Court-Ordered Receiver
 - (i) *Receiver:* Louis J. Timchak, Jr.
18810 Place Antibes
Lutz, Florida 33549-5341
Phone: (813) 948-6624 Facsimile (813) 948-6699
 - (ii) *Operator:* The Shaw Environmental & Infrastructure, Inc.
13300 U.S. Highway 41 North

Palmetto, Florida, 34221

Phone: (941) 722-4555 Facsimile (941) 729-3589

c) *Physical Address:* 13300 U.S. Highway 41 North

Palmetto, Manatee County, Florida 34221

Entrance road at 3.36 miles north of the intersection of U.S. 41 and
I-275 in Palmetto, Florida

Latitude 29° 23' 00" North

Longitude 82° 20' 00" West

UTM: Zone 17 – 348.5 km East and 3057.3 km North

d) *Mailing Address:* Post Office Box 7740

Sun City, Florida 33586

e) *Other Identifying Information: (Note: all of the information presented
below is for the bankrupt former Piney Point Phosphates, Inc. not the
Receiver)*

(i) *RCRA ID No.* = FLD 000654194

(ii) *NPDES ID No.* = FL 0000124

(iii) *Title V ID No.* = 0810002

(iv) *Storage Tanks ID No.* 8624260

(v) *SIC Codes:* 2874 - Phosphatic Fertilizers

2819 - Sulfuric Acid Manufacturing

f) *Key Contacts for Plan Development and Maintenance:*

Mr. Gary Uebelhoer

Environmental Consulting & Technology, Inc.

1408 N. Westshore Blvd., Suite 115

Tampa, Florida 33607

Mr. Sid VanLandingham

Shaw Environmental &
Infrastructure, Inc.

13300 U.S. Highway 41 North

Palmetto, Florida 34221

g) *Plan Numbers for Key Contacts:*

(813) 289-9338 (Phone)

(813) 245-3454 (Cellular)

(941) 722-4555 (Phone)

(352) 267-3500 (Cellular)

h) *Facility Phone Number:*

(941) 722-4555

i) *Facility Facsimile Number:*

(941) 729-3589

Sub-Part (a) = Facility Profile and Organization Chart: The phosphogypsum stack system described in Part 1. Sub-Part (d) is in the legal possession of the Receiver and is under the day-to-day control of Shaw. In conformance with Rule 62-672, F.A.C., Ardaman is the third-party geotechnical engineer responsible for preparing water balance and engineering evaluations and for overseeing retaining dike inspections, maintenance, and improvements authorized to be completed by the Receiver. Figure 1 presents the Receiver's organization chart.

Figure 1 also illustrates the roles and responsibilities of key onsite Shaw personnel in the event of an emergency situation, including an unplanned release of acids or acidic process water. As shown on Figure 1, there are three people qualified to serve as onsite emergency coordinators and another group of onsite personnel who are qualified to assist in the performance of response actions. The responsibilities of these personnel to respond to all emergency situations are described below.

All onsite personnel are familiar with Shaw's Emergency Action Plan (Health & Safety) Plan and have been trained to follow these procedures. The protection of human health is paramount, even during emergency events.

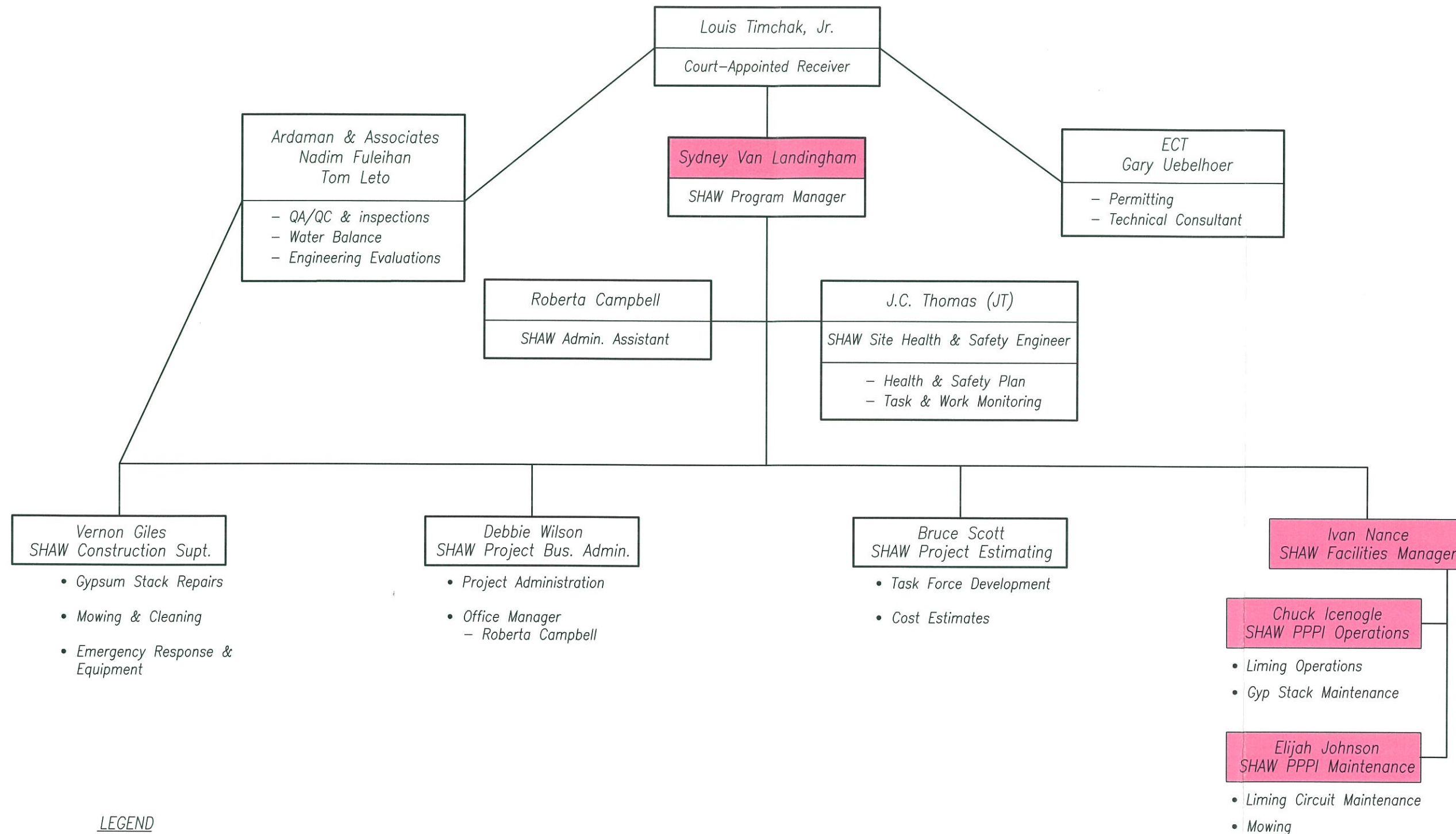


FIGURE 1.
RECEIVER'S ORGANIZATION CHART
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Source: ECT, 2002.

- (i) Onsite Emergency Coordinator: The calendar year 2001 staffing schedule provides for at least two staff members to be onsite at all times, a shift supervisor and a “gyp runner” who conducts the ongoing inspections of water levels, pumping systems, and dike integrity. This staff is comprised of former PPPI personnel who are familiar with the Piney Point complex and trained in responding to emergency situations. The three qualified onsite emergency coordinators are assigned to work first shift weekdays (i.e., Monday through Friday, 7:30 a.m. = 4:00 p.m.), but are “on call” 24 hours per day, seven days per week.

As shown in Section II, the Core Plan, the discoverer of an emergency situation (most likely to be the gyp runner) is instructed to contact the shift supervisor who is to contact all of the onsite emergency coordinators. *The first onsite emergency coordinator who arrives is then responsible for:*

1. *Notifying local, state, and federal agencies;*
2. *Conducting the preliminary assessment; and*
3. *Initiating the release response procedures.*

All onsite personnel will work under the supervision of the onsite emergency coordinator until the emergency conditions no longer exist, regardless of the reporting relationships shown on Figure 1.

- (ii) Key Emergency Response Personnel: The Response Management System presented in Annex 3 reviews the types of emergency situations that may occur and result in an increased potential for or an unplanned release. The principal risks at Piney Point are:

1. Electrical power failure;
2. Mechanical pump or pipeline failure;
3. Retaining dike failure; and/or
4. Extremely heavy precipitation.

Corresponding to each of these risks are members of the Receiver's Team who, due to their specific expertise, should be contacted by the Onsite Emergency Coordinator to assist in the assessment and initial release response procedures. Table 3 presents this specialized response expertise.

Table 3. Specialized Onsite Response Expertise at Piney Point

Type of Release Emergency	Onsite Expert	Contact Home/Cell Numbers
Electrical Power Failure	Elijah Johnson	(813) 663-0965/(863) 581-3780
Mechanical Pump or Pipeline Failure	Elijah Johnson	(813) 663-0965/(863) 581-3780
Retaining Dike Failure	Tom Leto (Ardaman) Jeff Beriswell (Ardaman)	(813) 685-4968/(863) 559-5480 (813) 651-3661/(863) 581-4431
Extremely Heavy Precipitation	See Ardaman O&M Plan	

Experience has demonstrated that consultation with all available expertise in these various disciplines and with all of the qualified onsite emergency coordinators will result in reduced release assessment time and implementation of appropriate initial release response procedures. Communications equals knowledge equals the best coordinated response action.

- (iii) Ongoing Preventive Maintenance Actions: The Receiver has authorized a number of actions to be taken to reduce the risk of release due to the four principal risk factors present at Piney Point. The following activities are ongoing to minimize these risks:

Electrical Power Failure: The following actions are completed routinely to prevent loss of power:

- Clean the insulators of the power distribution lines and transformers. Accumulation of dust and debris on them is conductive in rain and high humidity and can cause power grounding and loss of service and possible damage to the transformers and other equipment.
- Maintain spare fuses and other critical parts onsite.

- Check the oil in all transformers for breakdown and moisture. The loss of a transformer is possible with bad oil and/or moisture.
- Conduct infrared heat sensing survey on all the equipment (line insulators, switch gear internals, pole connections, etc.). This can indicate where potential for failure exists.
- Complete preventive maintenance on all critical switch gear (dismantle, clean, inspect, and lubricate). Moisture and unwanted rodents can cause the failure event. Corrosion and stocking gear can cause the loss of the gear.
- Preventive maintenance is required at least bi-monthly to assure continuing operating integrity of the equipment.

Pump and/or Pipeline Failure: The following actions are completed routinely to prevent mechanical pump or pipeline failures:

- Inspect all pumps and pipelines at least once per shift and note any deficiencies;
- Maintain spare parts onsite; and
- Maintain pumps as specified in the operation and maintenance manuals.

Retaining Dike Failure:

- Maintain water levels as specified by Ardaman;
- Inspect gypsum stacks, seepage ditches, and cooling ponds once per shift, seven days per week;
- *Contact Ardaman immediately upon detection of a “critical condition” that could include:*
 - Concentrated seepage on the outer face or downstream slope, at the toe of the slope, or downstream from the toe of the slope in the form of boils, gypsum or soil cones or deltas, or springs.

- Cracking of the gypsum or soil surface on the crest or face of the stack/dike; bulging on the downstream face of the stack/dike.
 - Evidence of slope instability including sloughing, bulging, or heaving of the downstream slope or subsidence of the stack/dike slope or crest.
 - General or concentrated seepage in the vicinity of or around any conduit through the dike.
 - Increased, decreased, or turbid flow from existing drain pipes.
 - Abnormal wilted or dead vegetation or damp areas on the downstream slope, at the toe of the slope, or downstream from the toe of the slope that could indicate pond water seepage.
 - Surface erosion, gullying, or wave erosion on the upstream slope of the stack/dike.
 - Surface erosion or gullying on the downstream slope of the stack/dike.
 - Lateral movement or subsidence of the slope or crest.
 - Formation of new non-shrinkage cracks or enlargements of wide cracks in the surface of the slope or crest of the stack/dike.
- Repair boils as soon as possible;
 - Maintain equipment and supplies onsite to repair boils;
 - Maintain the roadway network to facilitate routine inspections and maintenance activities and to ensure access for quick response to all active areas onsite in case of an emergency event; and
 - Mow all retaining dikes routinely to permit thorough inspections.

Heavy Precipitation Risk:

- Maintain current rainfall and water level data to permit updating of the water balance model on a weekly basis;

- Monitor weather forecasts carefully; and
 - Implement Ardaman action plan to manage water in the event of forecast or actual heavy precipitation.
- (iv) Onsite Emergency Equipment: As part of the site O&M, Shaw will maintain onsite a basic pool of equipment at the Piney Point site that is required for quick, timely actions to respond to or prevent an emergency event. In addition, this equipment will be used as part of the general O&M activities as required. When this equipment is not being used for the above, it will, if applicable, be used on construction tasks, as appropriate. Equipment operators have been allocated to these tasks for support of general and ongoing O&M activities and maintenance of the equipment. The equipment being maintained at Piney Point is listed on Table 4.

Table 4. Onsite Emergency Response Equipment and Supplies

Equipment:

- One hydraulic excavator with 36-foot reach;
- One front-end loader;
- Two 6 x 6 (1,500 gpm) diesel-powered pumps;
- One 125 KW diesel-powered generator;
- One 4,000 gpm high-head diesel-powered pump;
- Motorola radio system (± 60 hand held units); and
- Nextel cell phone system.

Supplies:

- Spare pressure-treated spillway boards;
- Spare fuses/breakers for electrical equipment;
- Pump intake and discharge lines;
- Absorbent pads, booms, and materials;
- Water quality sampling equipment and kits;
- Personal protective equipment; and
- Bottled drinking water (50 gallons).

Sub-Part (b) = Regulatory Requirements—the Receiver's ongoing actions are considered by the Department to be remedial actions. Accordingly, the Secretary of the Department has notified the Receiver that the Department does not consider the Receiver

to be an “owner” or “operator” of a gypsum stack system. Nevertheless, the department has advised the Receiver that the substantive requirements should be met, recognizing that the Receiver inherited facilities that historically did not comply with certain substantive requirements and may not be able to be brought in conformance in the near term.

Chapter 62-672, F.A.C. establishes the minimum requirements that owners of phosphogypsum stack systems must meet until the system is closed in accordance with Chapter 62-673, F.A.C. The Receiver has instructed Shaw, along with the retained Third-Party Engineer, Ardaman, to comply with the substantive requirements of Chapter 62-672, F.A.C. and, where non-compliance conditions were inherited from PPPI, to bring the Piney Point gypsum stack system into conformance with these requirements to the extent practicable and for which funds from the Department are available.

Chapter 62-672, F.A.C., requires the owner of a phosphogypsum stack system to prepare and maintain several plans to protect the environment from the adverse impacts that could result from the release of untreated process water from a phosphogypsum stack system. Figure 2 illustrates the relationship of these various plans.

The principal prevention plan is called the “Operation Plan”, which is required by Rules 62-672.780(1)(4)(5)(6) and (7). As shown on Figure 2, the Operation Plan must detail how the phosphogypsum stack system will be operated and maintained, including spill prevention measures in the event of power or equipment failures. Because Shaw has been retained to “operate” the Piney Point phosphogypsum stack system, Shaw prepared an O&M plan, a copy of which is being kept at all appropriate locations at the Piney Point facilities. Together with the Ardaman Plan discussed below and this Contingency Plan, the Shaw O&M plan provides the information specified.

In addition, Rule 62-672.850(8) requires preparation of a site-specific water management plan that must address how process water will be contained in the event of a 12-inch storm event. the Receiver instructed Ardaman to design additional storage

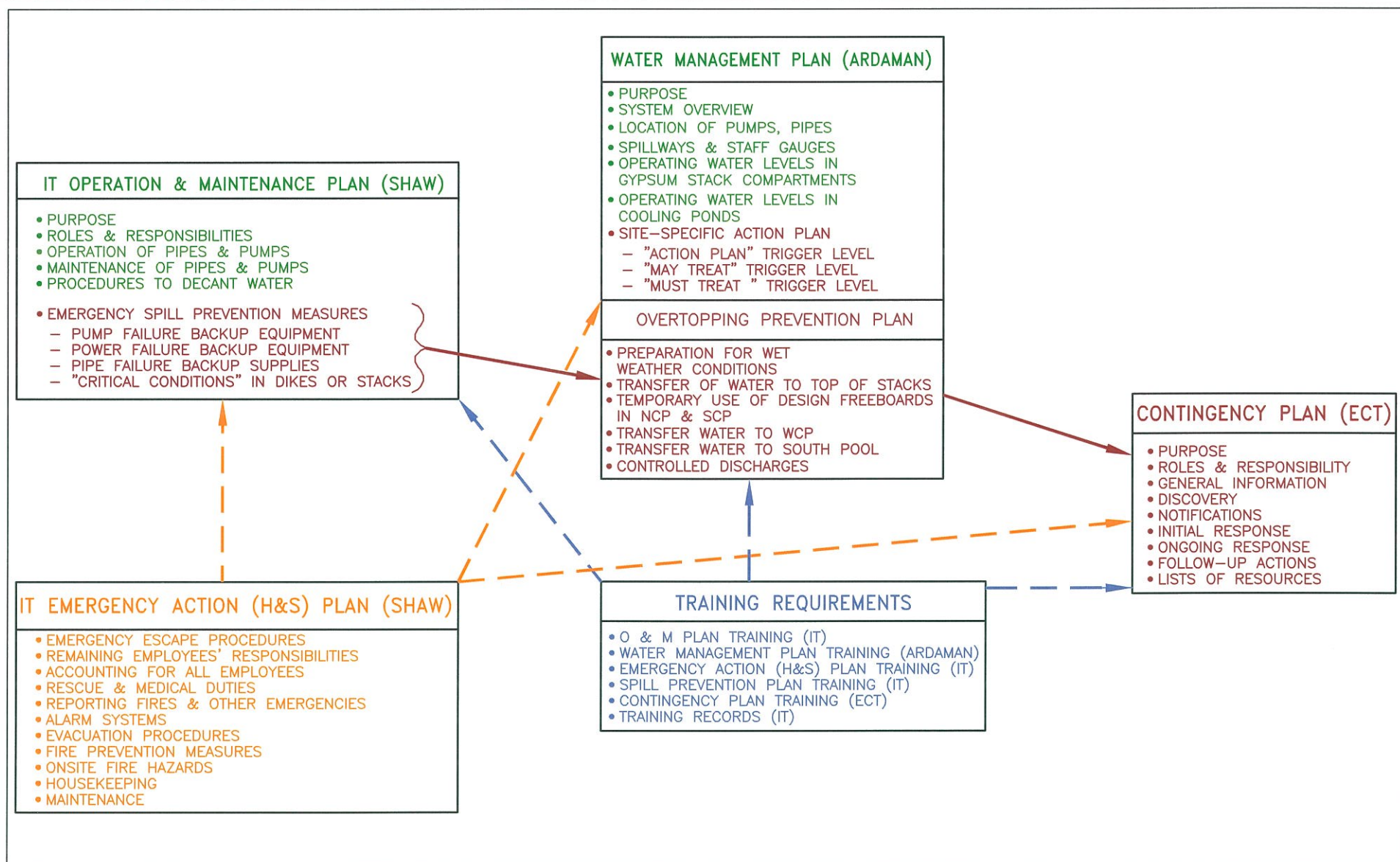


FIGURE 2.
RELATIONSHIP BETWEEN MANAGEMENT & EMERGENCY PLANS
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

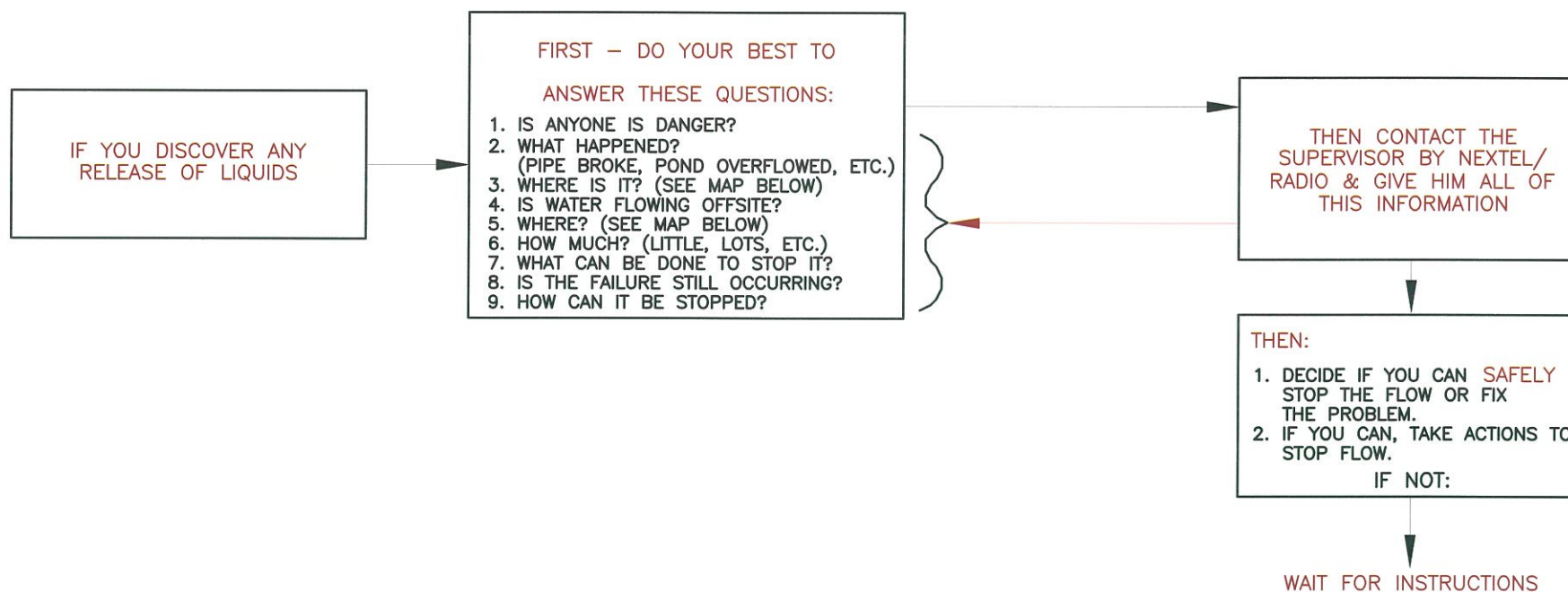
Source: ECT, 2002.

capacity and to prepare the “site-specific action plan” required by this rule. Ardaman is also responsible for developing plans to comply with Rule 62-672.840(9), which requires specifying the procedures to be followed to avoid overtopping of the perimeter dikes at the Piney Point phosphogypsum stack system. This analysis is incorporated into Ardaman’s site-specific water management plan.

This Contingency Plan is required by Rule 62-672.850, F.A.C. and its relationship to the Operation and Water Management Plans is shown in Figure 2. This Plan provides the procedures to be followed if water is released from the system. In essence, this Contingency Plan is the list of emergency response actions to be taken in the event of overtopping due to insufficient storage and/or treatment capacity or in the event of a dam or dike failure or any unplanned release of water.

SECTION II

CORE PLAN



DISCOVERY RESPONSE ACTIONS
RELEASE OF LIQUIDS
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA
Source: ECT, 2002.

ONSITE SUPERVISOR'S RESPONSE DUTIES:

① ANNOUNCE "CODE RED"
ALERT ON RADIO 3 TIMES

② CALL
ALL OF THESE PEOPLE:

① IVAN NANCE @ PLANT EXTENSION: 262
MOBILE: (863) 581-3758
HOME: 646-0089

② CHUCK ICENOGLE @ MOBILE: (863) 581-3778
HOME: (941) 704-0839

③ SID VAN LANDINGHAM @ PLANT EXTENSION: 222
MOBILE: (352) 267-3500
HOME: (352) 242-9121

④ ELIJAH JOHNSON @ MOBILE: (863) 581-3780
HOME: (813) 653-0965

③ COUNT HOW MANY STAFF ARE ONSITE TO HELP.

④ STAY AT RELEASE SITE AND WAIT FOR INSTRUCTIONS, UNLESS IN PERSONAL DANGER.

INITIAL NOTIFICATIONS
RELEASE OF LIQUIDS
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA
Source: ECT, 2002.

ONSITE COORDINATOR'S DUTIES

CONFIRM AND CATEGORIZE RELEASE

CATEGORY I : A release that can
be contained onsite

CATEGORY II: A release that cannot
be contained onsite.

CATEGORY III: A major offsite release

NOTIFY:

911 MANATEE COUNTY EMERGENCY
(800) 320-0519 STATE WARNING POINT
(800) 424-8802 NATIONAL RESPONSE CENTER
(941) 748-4501 MANATEE COUNTY EMERGENCY MANAGEMENT

DEP PHOSPHATE MANAGEMENT

BUSINESS HOURS

(813) 744-6100 (X138)
(813) 744-6457 (FAX)

AFTER HOURS

(813) 684-0990 SAM ZAMANI
(813) 855-5466 GEORGE SHARROCK
(941) 722-4458 VISHWAS SATHE
(863) 815-8250 ANDY CHUPKA

- | | |
|---|--|
| 1. FACILITY NAME: PINEY POINT PHOSPHATES | 11. WHERE? |
| 2. FACILITY I.D. NO.: FLD000654194 | 12. WHEN? |
| 3. FACILITY ADDRESS: 13300 U.S. 41 NORTH
PALMETTO, FL, 34221 | 13. AMOUNT RELEASED?
POND WATER _____GALS.
SINGLE-LIMED WATER _____GALS.
TRANSFORMER OIL _____GALS.
GASOLINE _____GALS.
DIESEL FUEL _____GALS.
MAINTENANCE CHEMICALS _____DRUMS
LAB CHEMICALS _____DRUMS
OTHER (DESCRIBE): _____ |
| 4. FACILITY PHONE NO.: (941) 722-4555 | |
| 5. FACILITY FAX NO.: (941) 729-3589 | |
| 6. TYPE OF RELEASE: | |
| 7. SOURCE OF RELEASE: | 14. NEED FOR ASSISTANCE? YES/NO |
| 8. CAUSE OF RELEASE: | 15. PUBLIC HEALTH RISK? YES/NO |
| 9. WHEN WAS RELEASE? | 16. ENVIRONMENTAL RISK? YES/NO |
| 10. FLOW OFFSITE? | |

ONSITE EMERGENCY COORDINATOR'S DUTIES
RELEASE OF LIQUIDS
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA
Source: ECT, 2002.



PRELIMINARY ASSESSMENT PROCEDURES

- ① CONFIRM THE SOURCE
- ② CONFIRM THE CAUSE
- ③ SUMMON EXPERTS TO STOP THE RELEASE

MECHANICAL/ELECTRICAL

ELIJAH JOHNSON (813) 653-0965 (HOME)
(863) 581-3780 (CELL)

EARTHWORK

VERNON GILES (863) 781-5555 (HOME)
(863) 581-3756 (CELL)

TOM LETO (813) 685-4968 (HOME)
(863) 559-3480 (CELL)

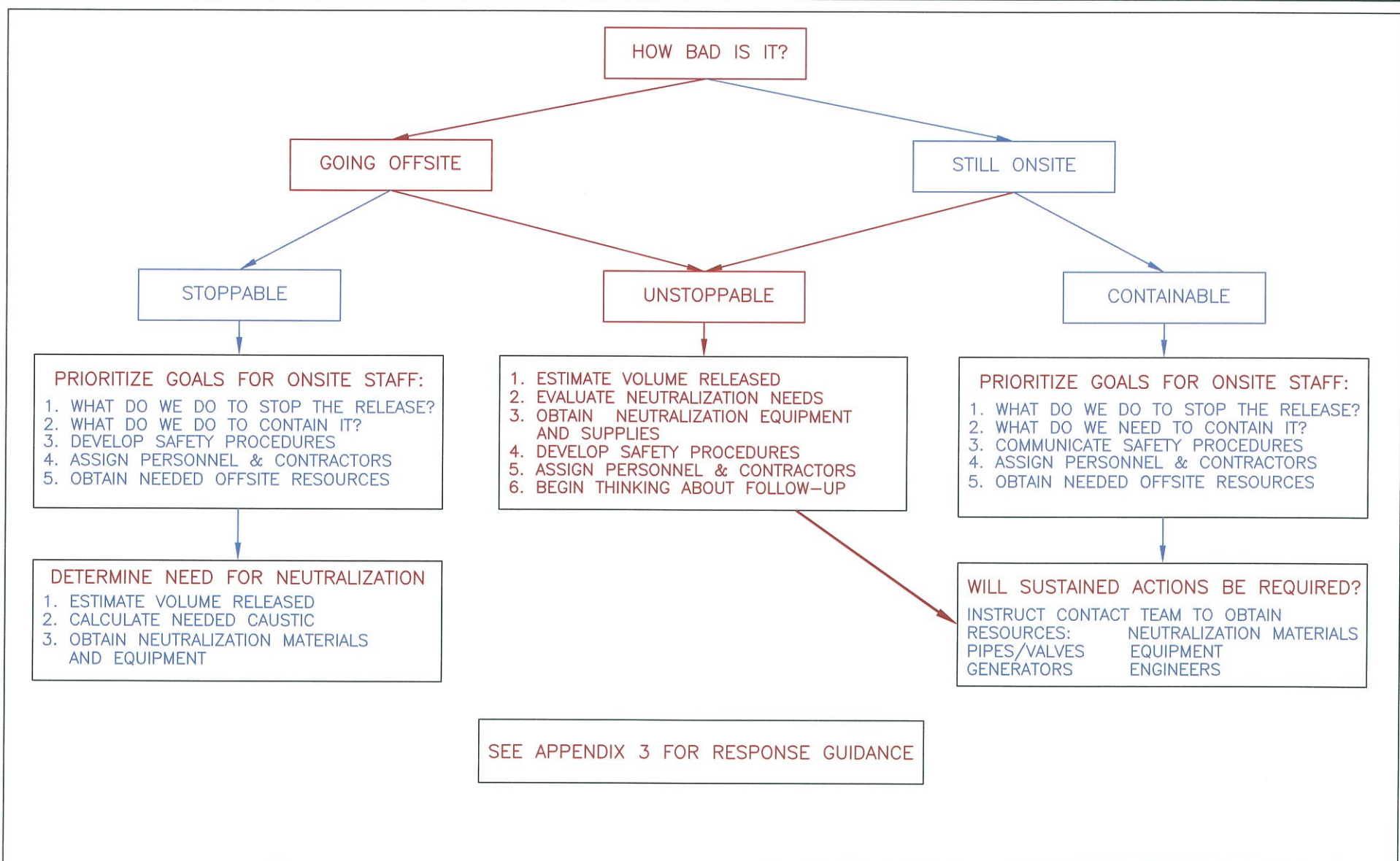
JEFF BERISWELL (813) 651-3661 (HOME)
(863) 581-4431 (CELL)

- ④ SUMMON TEAM MEMBERS AS NEEDED
- ⑤ UPDATE COUNTY 911 / STATE WARNING POINT /
NATIONAL RESPONSE CENTER AS APPROPRIATE

PRELIMINARY ASSESSMENT PROCEDURES
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Source: ECT, 2002.

 **ECT**
Shaw™ Environmental Consulting & Technology, Inc.



RELEASE RESPONSE PROCEDURES
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Source: ECT, 2002.

SUSTAINED RESPONSE ACTIONS SHOULD BE
DEVELOPED & IMPLEMENTED AS INSTRUCTED BY THE RECEIVER:

AFTER CONSULTATION WITH:

- THE DEPARTMENT,
- THE RECEIVER'S THIRD PARTY ENGINEER,
- THE RECEIVER'S ENVIRONMENTAL CONSULTANT, &
- COUNSEL TO THE RECEIVER

SUSTAINED RESPONSE ACTIONS MAY INCLUDE:

- CONTINUED NEUTRALIZATION WITH CAUSTIC SOLUTION
- EXCAVATION & DISPOSAL OF IMPACTED SOILS
- WELLPOINT RECOVERY OF RELEASED MATERIAL
- SURFACE AND/OR GROUND WATER QUALITY MONITORING
- TRANSFER OF POND WATER TO EMERGENCY HOLDING AREAS
- TREATMENT AND DISCHARGE OF POND WATER
- ADDITIONAL FOLLOWUP REPORTING
- CHECK NEED FOR AGENCY APPROVALS
- IMPLEMENTATION OF DIKE REPAIRS/UPGRADES

SUSTAINED RESPONSE ACTIONS
RELEASE OF LIQUIDS
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA
Source: ECT, 2002.



OFFSITE HELP / RESOURCES

ELECTRICAL

J H HAM : (863) 646-1448
STEVE MEIER : (863) 640-1585 (C)
(863) 645-7889 (H)
LEEDY : (863) 425-2698

PIPES / VALVES / FITTINGS

HUGHES SUPPLY : (863) 680-6883

TANK TRUCKS

CTL (MULBERRY): (863) 428-2373
WALPOLE (TAMPA): (800) 741-6800
DSI (TAMPA): (813) 626-1161

ABSORBENT MATERIALS:

ARDAMAN OFFICE: (863) 533-0858
(407) 855-3860
TOM LETO HOME: (813) 685-4968 (BARTOW)
TOM LETO CELL: (863) 559-3480 (ORLANDO)
JEFF BERISWELL HOME: (813) 651-3661
JEFF BERISWELL CELL: (863) 581-4431
NADIM FULEIHAN HOME: (407) 855-1434
NADIM FULEIHAN CELL: (407) 341-2389

CAUSTIC SOLUTION: GATX (813)241-1113

CAUSTIC SODA (DRY): CF 533-3181

CONSTRUCTION EQUIPMENT:

KOVACS: (863)425-5022 / 944-1110
McDONALDS: (863)646-5763 / 640-4230
HERTZ: (863)668-0393 / 965-3162 /
285-2639

EMERGENCY HELP: 911

LEPC: (941) 748-4501

ECT (GARY): OFFICE: (813)289-9338 x343
HOME: (727)367-1310
CELL: (813)245-3454

HOSPITAL: (941) 746-5111 (GENERAL)
(941) 745-7466 (EMERGENCY)

GENERATORS: RINGHAVER (813)671-3700
GODWIN (800) 467-3700
→ PIN 5982505

LIGHTS: RINGHAVER (813)671-3700

LIME: CHEM LIME (863)425-0596 (863)425-1544

NEUTRALIZATION EQUIPMENT:

ALEX TOTH: (813)247-2780
CARGILL: 534-9798

PUMPS: ALEX TOTH (813) 247-2780

POWER (FPC):

SAFETY EQUIPMENT: JOHN FINK (813)645-8173
RICK KEDDY (813)985-8513

CONTACT TEAM PROCEDURES
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Source: ECT, 2002.

 **ECT**
Environmental Consulting & Technology, Inc.

TERMINATION WILL OCCUR ONLY:

- UPON AUTHORIZATION BY THE RECEIVER....
- AFTER CONSULTATION WITH THE DEPARTMENT, AND...
- IF THE HAZARD OR RISK HAS BEEN ABATED, AND....
- AFTER AN ORDERLY DEMOBILIZATION PLAN HAS BEEN DEVELOPED...

TERMINATION INCLUDES FINAL REPORTING AS REQUIRED

FOLLOWUP WILL CONSIST OF:

- A "LESSONS LEARNED" REVIEW BY THE RECEIVER.
- PLAN REVISIONS, AS DEEMED APPROPRIATE BY THE RECEIVER
- DEVELOPMENT AND IMPLEMENTATION OF PLANS TO MITIGATE THE IMPACTS OF THE RELEASE AND TO MANAGE ALL WASTES APPROPRIATELY

TERMINATION OF RESPONSE AND FOLLOWUP

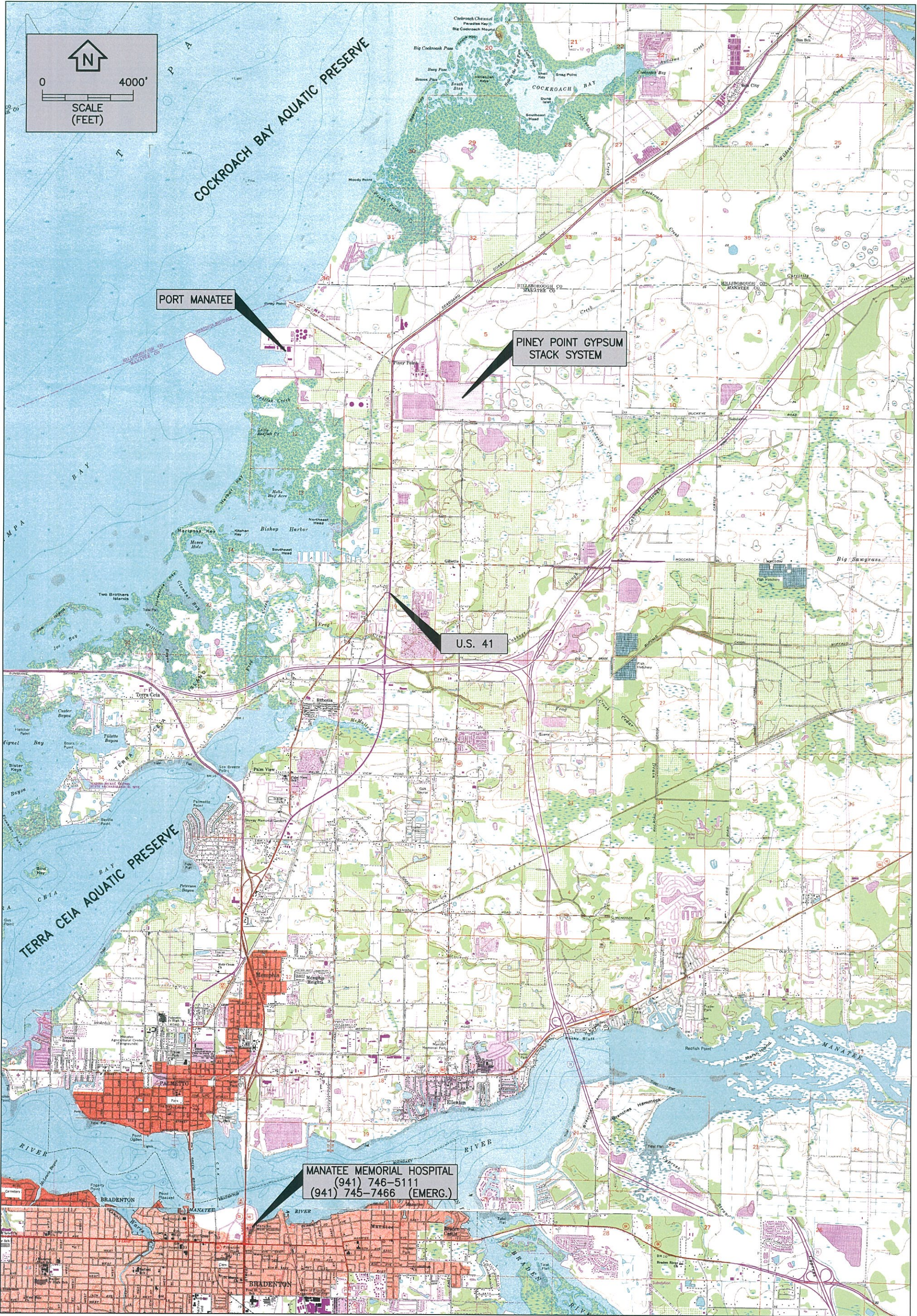
PINEY POINT PHOSPHATES GYPSUM
STACK SYSTEMS



Shaw Environmental & Infrastructure, Inc.



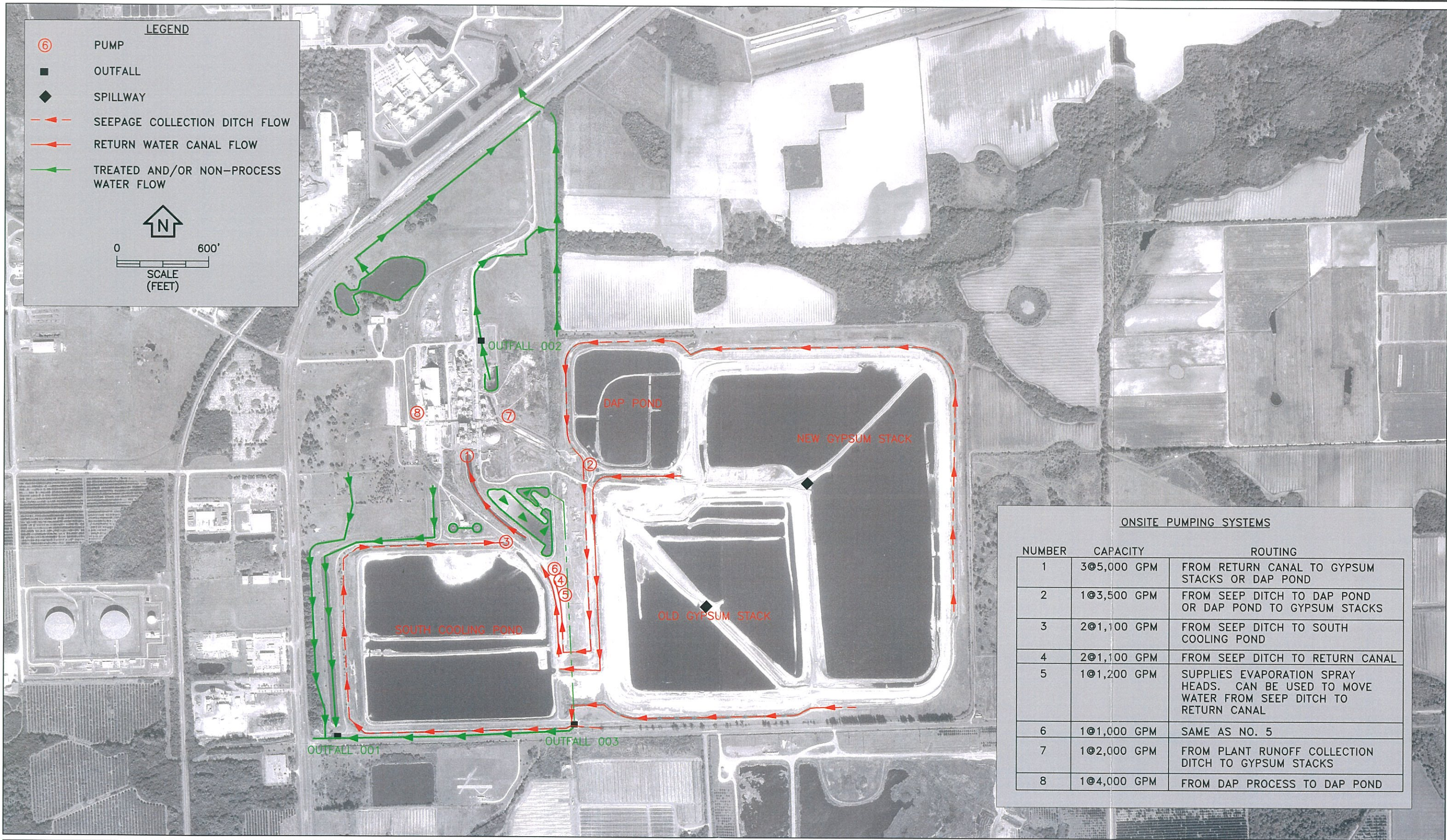
Environmental Consulting & Technology, Inc.



MAP 1.
REGIONAL LOCATION MAP
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

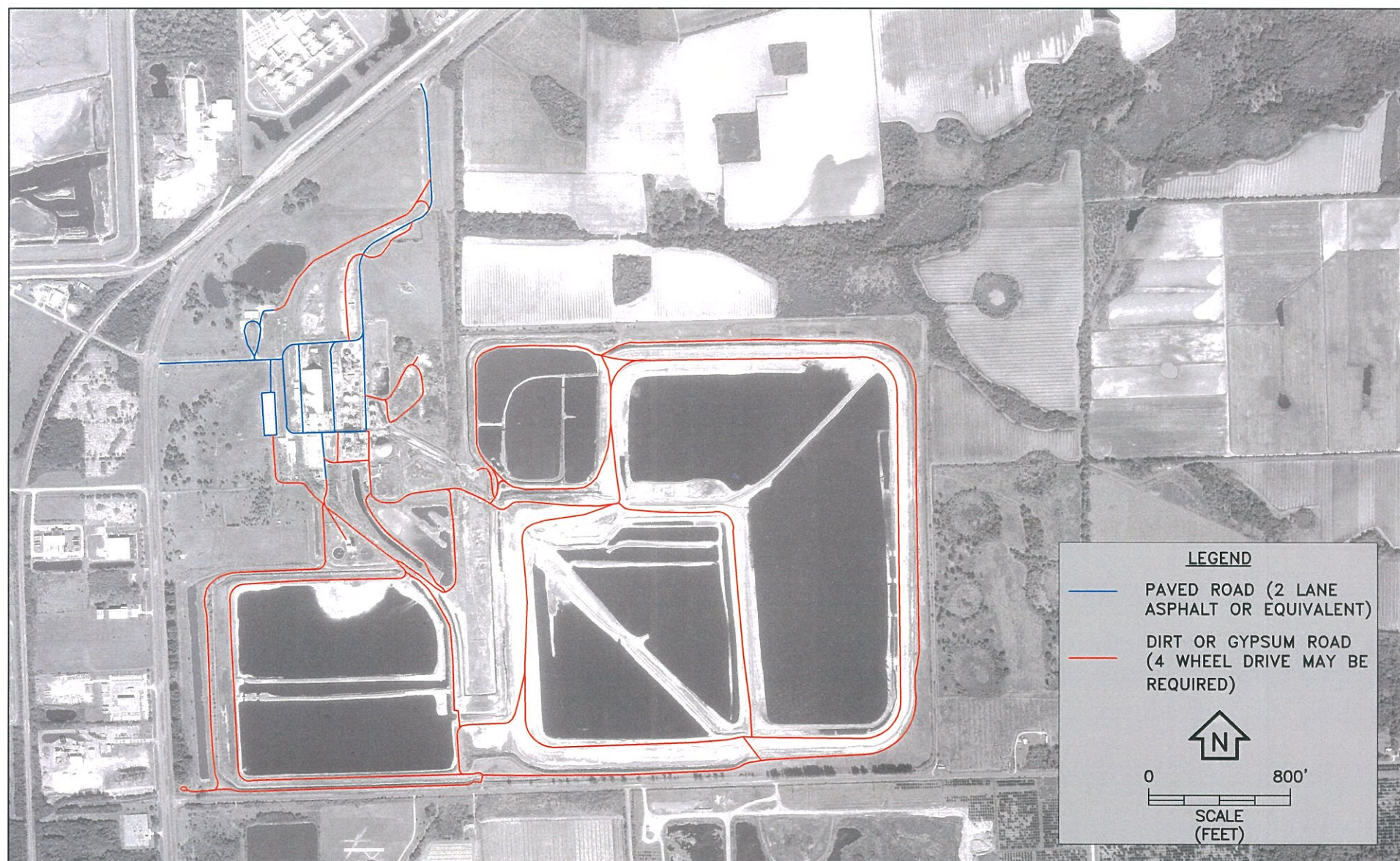
Sources: USGS Quad Maps of Cockroach Bay, Bradenton, Ruskin & Parrish, FL; ECT, 2002.





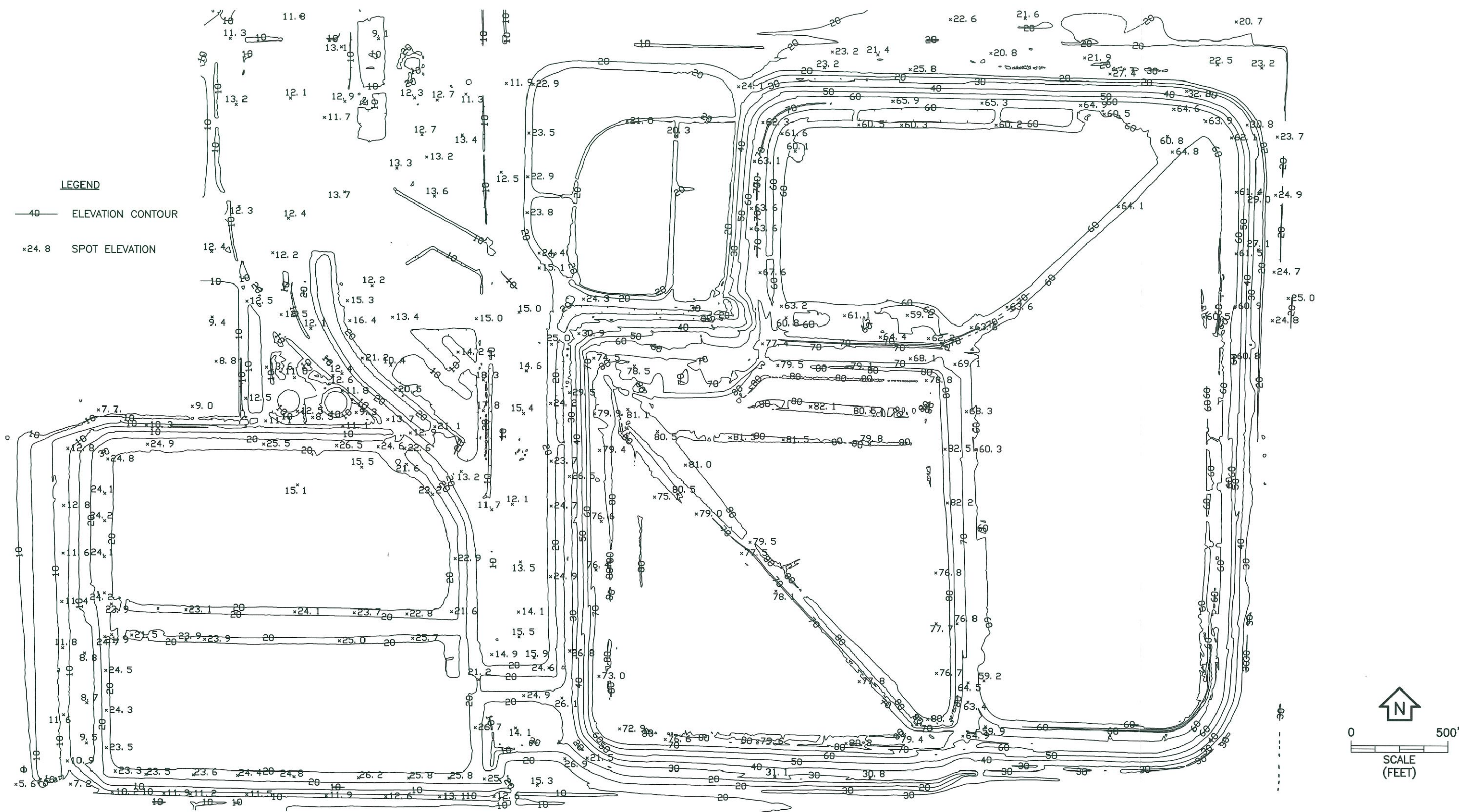
MAP 2.
PHOSPHOGYPSUM STACK SYSTEM
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Sources: I.F. Rooks, 2001; Ardaman & Associates, 2001; ECT, 2002.



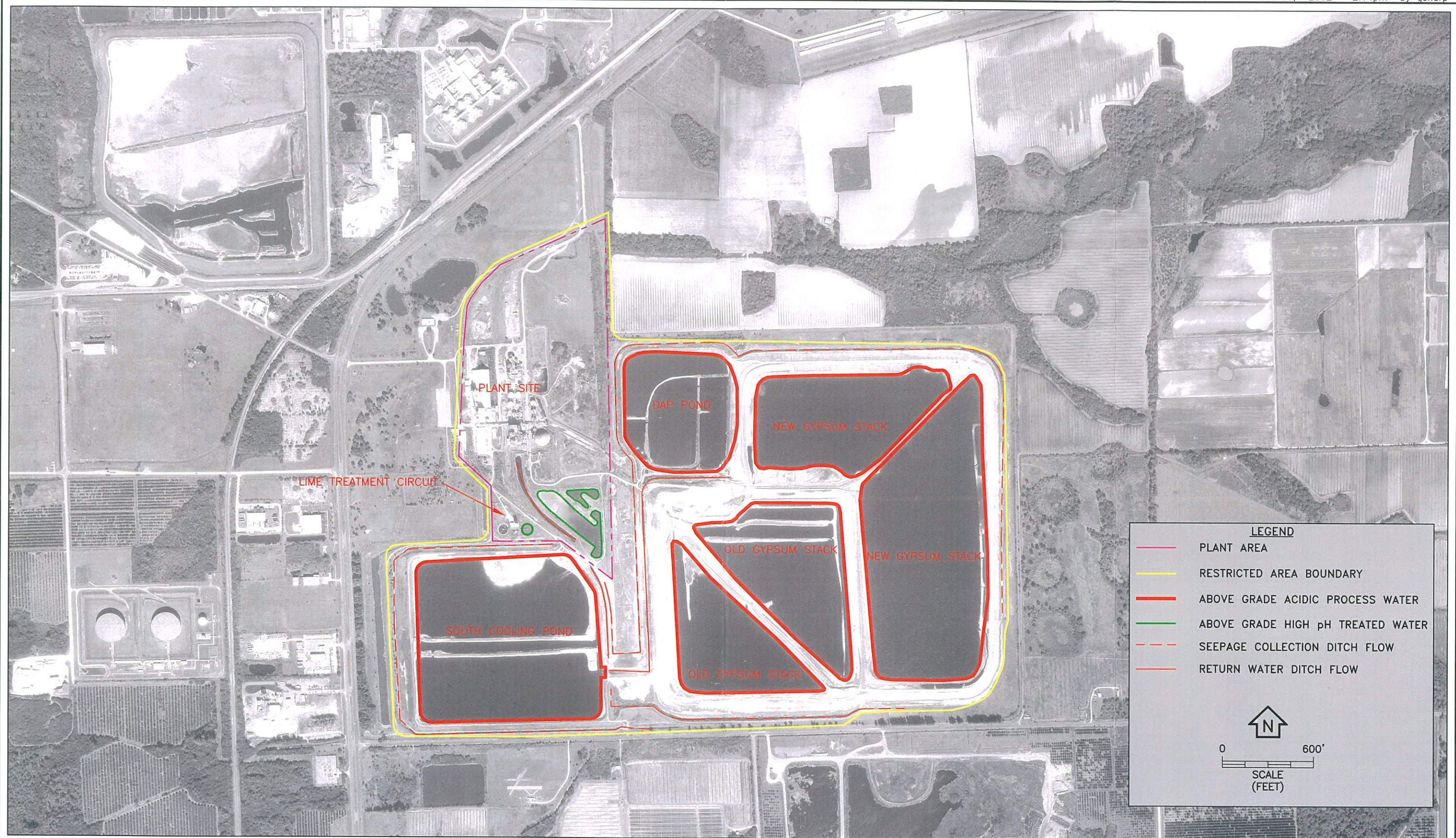
MAP 3.
ONSITE ROADS
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Sources: Ardaman & Associates; ECT, 2002.



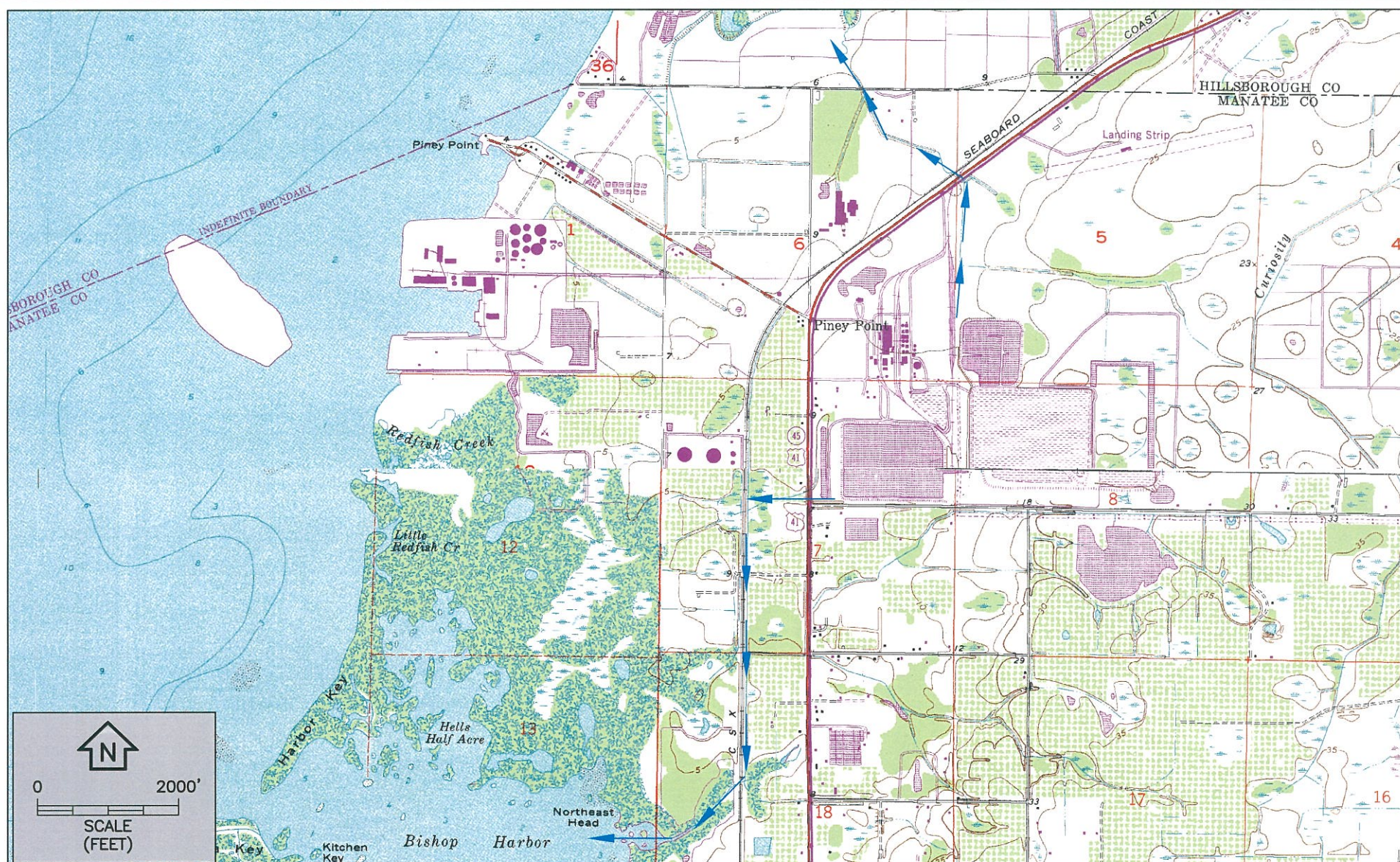
MAP 4.
ONSITE TOPOGRAPHY
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Sources: I.F. Roofs; Ardaman & Associates; ECT, 2002



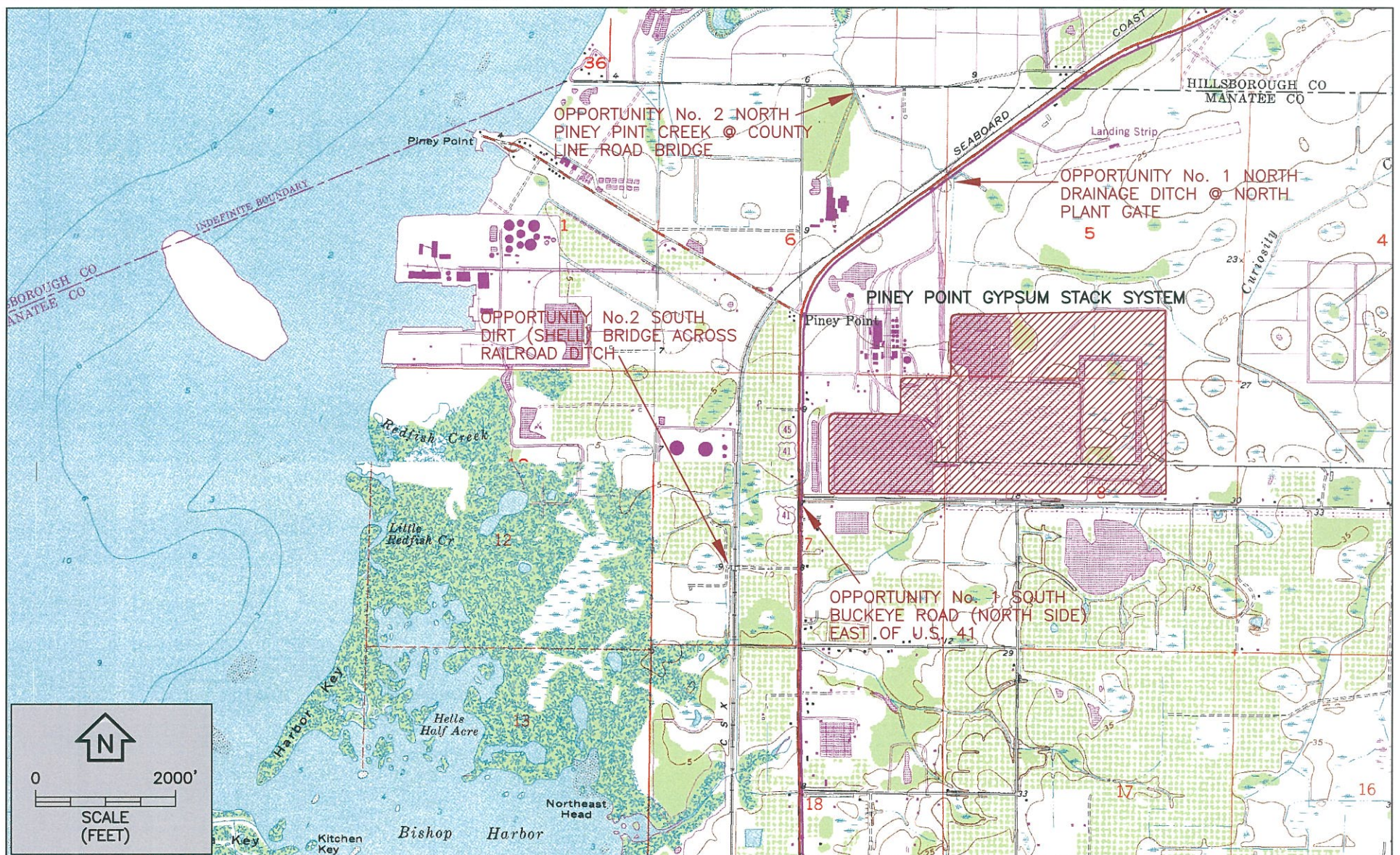
MAP 5.
POTENTIAL FOR RELEASES AND HAZARDS
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Source: ECT, 2002.



MAP 6.
DOWNSTREAM OFFSITE FLOWPATH MAP
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Sources: USGS Quad Maps of Cockroach Bay & Parrish, FL.; ECT, 2002.



MAP 7.
POTENTIAL NEUTRALIZATION POINTS IN THE IMMEDIATE VICINITY
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Source: ECT, 2002.

ANNEX 1

FACILITY AND LOCATION INFORMATION

ANNEX 1

FACILITY AND LOCATION INFORMATION

As described Section I, Plan Introduction, a Court Appointed Receiver has taken legal possession of the Piney Point Phosphates, Inc. (PPPI) gypsum stack systems on behalf of the Florida Department of Environmental Protection (FDEP or the Department). The Receiver is responsible for maintaining the gypsum stack systems in a manner that prevents offsite releases of acidic process water. Although the Receiver does not have the possession of the former production facilities, except as needed to maintain the gypsum stack systems, the Receiver is aware of risks or hazards posed by these abandoned facilities. Accordingly, those risks have been incorporated into the development of the Receiver's Integrated Contingency Plan and are shown on the maps and figures presented below.

a. Facility Maps

The following facility maps have been prepared to assist responders who are unfamiliar with the site:

Map No.	Description	Page No.
1	USGS Quadrangle vicinity map	3-1
2	Aerial photograph illustrating gypsum stack system	3-2
3	Aerial photograph illustrating onsite roads	3-3
4	Topography and drainage map	3-4
5	Aerial photograph illustrating potential hazards and sources of releases	3-5
6	Downstream offsite flow path map	3-6
7	Neutralization points in the immediate vicinity	3-7

b. Facility Drawings

Two sets of former Piney Point drawings should be reviewed by Responders who will be providing onsite response assistance. These are:

1. Former Piney Point Piping and Instrumentation Diagram
2. Former Piney Point Electrical Diagram

Both of these sets of drawings are kept onsite in the office complex.

Responders should be aware of the likelihood of partial obsolescence of these two drawings. Nevertheless, they are the most recent available and, therefore, the most accurate.

c. Ardaman Water Management/Operation Plan

This operation plan formalizes the phosphogypsum stack system process water management/operating procedures at the former Piney Point Phosphates, Inc. (PPPI) Plant. It provides written documentation to be used in training appropriate personnel. Copies of the Ardaman O&M Plan are kept onsite. Operators and inspectors should study it and refer to it, as needed.

ANNEX 2

INTERNAL, COMMUNITY, AND AGENCY NOTIFICATIONS

ANNEX 2

INTERNAL, COMMUNITY, AND AGENCY NOTIFICATIONS

Through the publication and distribution of this Plan, the Receiver has committed to and developed a formal notification protocol to be implemented in the event of a spill, leak, or release of acidic process water or regulated substances. The notification plan presented in Section II, the Core Plan, provides for internal notifications of all incidents and community and agency notifications of all offsite releases regardless of the severity of the release whether or not required by federal or Florida laws.

a. Internal Notifications

The internal notification protocol is designed to proceed up the chain of command from the discovery of the release....from the discoverer to the onsite supervisor....and from the onsite supervisor to one or more of the three Shaw Onsite Emergency Coordinators; and Mr. Timchak, the Receiver.

The first Shaw Onsite Emergency Coordinator to arrive on the scene is responsible for determining which additional Shaw personnel should be contacted and summoned to the site. This decision is to be made immediately after the Onsite Emergency Coordinator has had an opportunity to evaluate the severity of the incident, however, the Onsite Emergency Coordinator likely will have to make this decision before the preliminary assessment is complete. If additional Shaw personnel are to be called, this responsibility is to be assigned by the Onsite Emergency Coordinator.

b. Community Notifications

As shown in Section II, the Core Plan, the first Shaw Onsite Emergency Coordinator to arrive on the scene will first confirm the release and then notify community emergency response agencies.

Additional community notifications will occur once the Preliminary Assessment is complete. If the Preliminary Assessment concludes that an offsite release of a gas or

liquid has occurred, is occurring, or likely will occur, the Onsite Emergency Coordinator or his designee will recontact the community authorities shown below by telephone:

- Manatee County emergency management agency: (941) 748-4501
- Manatee County Sheriff: 911

If, however, the Preliminary Assessment concludes that the releases will be maintained onsite, the Onsite Emergency Coordinator or his designer will so advise these local agencies.

c. Federal and State Agency Notifications

Notification of federal and state agencies will occur as soon as the first Shaw Onsite Emergency Coordinator to arrive on the scene confirms that a release has occurred, **but not later than 15 minutes after discovery of the incident.** The Onsite Emergency Coordinator is responsible for classifying the release as:

- Category III = Offsite Major Release has occurred or is inevitable;
- Category II = Offsite Release has occurred or is inevitable; and
- Category I = An Onsite Release has occurred but can be contained onsite.

If the category of release changes following the initial notification, the Onsite Emergency Coordinator will renotify state and federal agencies.

The Phosphate Management Section of the Department will be notified of all releases, regardless of volume and containment. This procedure is in place because: (1) the Department's role as the funding source for the Receiver; and (2) the Department's role as the principal regulatory agency.

ANNEX 3

RESPONSE MANAGEMENT SYSTEM

ANNEX 3

RESPONSE MANAGEMENT SYSTEM

a. General Information

Section I, the Plan Introduction, explained that this Integrated Contingency Plan follows the fundamental principles of the national Interagency Incident Management System-Incident Command System (NIIMS-ICS). As a result, the following discussion explains how the Receiver has developed an organization that fits within the NIIMS-ICS structure. In addition this Annex provides reference information for public agency or offsite contract response personnel concerning:

- The onsite, or internal, command structure;
- Internal procedures for public notification;
- Safety of all response personnel;
- Liaison with public response groups; and, most importantly
- Response procedures.

(1) Structure of the Response Management System

The Receiver's response management system consists of an integrated team of people employed by Shaw, Ardaman, ECT, and the Department. Figure 3 is the organization chart that illustrates the responsibilities of each team member and the flow of information in the event of an emergency incident. The hierarchical format of the chart illustrates how the unified command system forms as team members arrive.

Specifically, Sid Van Landingham of Shaw is the facility Incident Commander. In support of Mr. Van Landingham, Messrs. Nance, Icenogle, or Johnson will serve as the Onsite Emergency Coordinator. As shown on Figure 3, the facility Incident Commander is the unified command of the Piney Point response management system. The dotted line above Mr. Van Landingham illustrates that, in the event of emergency response conditions, particularly during the discovery, preliminary assessment, and initial response phases, Mr. Van Landingham is in command. He may choose to seek advice from the

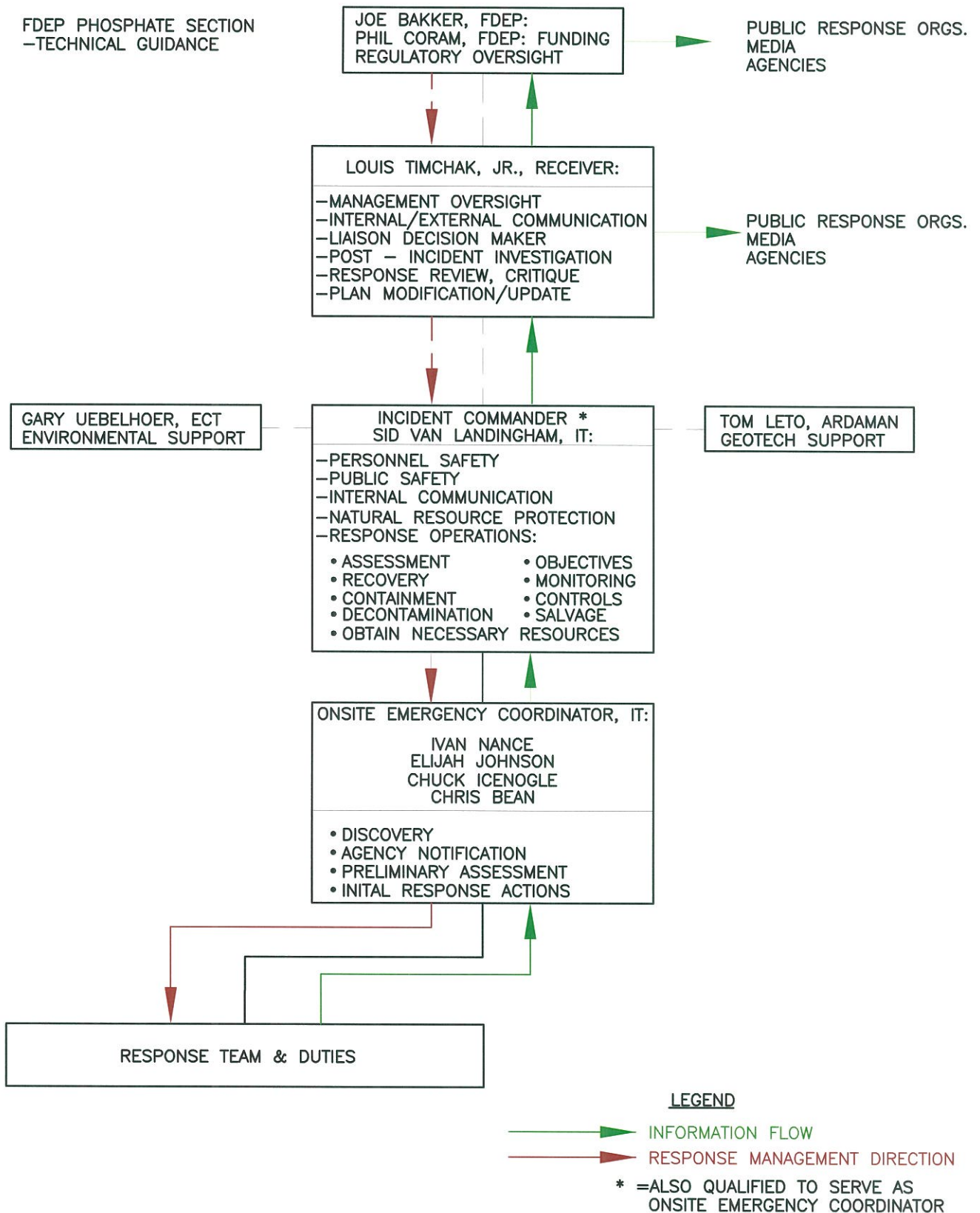


FIGURE 3.
RESPONSE MANAGEMENT ORGANIZATION
PINEY POINT GYPSUM STACK SYSTEM
MANATEE COUNTY, FLORIDA

Department, the Receiver, Ardaman, ECT, or Shaw personnel; however, due to the need for quick decisions during emergencies, he or the Onsite Emergency Coordinator is empowered to act without waiting for direction or advice.

Mr. Van Landingham has at his service a team of technically-qualified personnel who work daily in the field at the Piney Point facility and, therefore, are most qualified to conduct preliminary assessments and devise initial response actions. Also, these individuals are safety trained; aware of the hazards and risks onsite; and aware of the resources available to respond to any unplanned releases.

The Receiver will oversee Mr. Van Landingham's implementation of the response management system, but will not serve as the Incident Commander during the assessment and initial response actions. During these initial phases, the Receiver will liaison with FDEP, public response agencies, the media, and other government agencies, after consulting with the Department, to properly apportion these responsibilities. The Receiver will support the Incident Commander, Mr. Van Landingham, as necessary.

The Receiver will become the decisionmaker once initial response actions are complete and the response efforts shift to the sustained actions and the termination and followup phases. As shown on Figure 3, the Receiver also assumes lead responsibility for implementing: (1) the post-incident investigation procedures outlined in Annex 4; and (2) the response critique and Plan review and modification process outlined in Annex 6. Implementation of the Receiver's instructions with respect to these four "later phase" actions (i.e., sustained actions, termination and followup, post-accident investigation, and response critique) will be performed by the Shaw/Ardaman/ECT team.

b. Command Structure

(1) Incident Commander and Qualified Individuals

The Incident Commander is Mr. Van Landingham, as noted in the above organizational discussion. Any of the three qualified individuals shown on Figure 3 (i.e., Messrs. Nance, Johnson, or Icenogle) are capable of assuming the Onsite Emergency Coordinator

responsibilities. Mr. Van Landingham will direct the emergency response through its completion, which is defined as the transition from initial emergency response to sustained actions.

The Receiver will be the decisionmaker concerning: (a) the need for sustained actions; and (b) termination and followup of the emergency. Because these decisions are less time-sensitive, the Receiver will consult with the Department, other public response agencies, and the Receiver's organization (see Figure 1) before finalizing and implementing decisions concerning sustained actions and termination and followup. The dashed "response management direction" arrows are intended to reflect the Receiver's roles during both the initial and sustained action plan.

(2) Internal and External Communications

Internal communications will flow as shown in green on Figure 3. All personnel will be instructed to communicate verbally during the assessment and initial response phases using the Nextel® cellular phones system that Shaw has in place. Use of e-mail and voice-mail is to be minimized because it is not assumed that personnel will be at their desks retrieving e-mails and voice mails. In order to be effective, the key internal communications, such as action items, status of response efforts, etc. should be through the Incident Commander, recognizing that the Incident Commander may delegate dissemination of certain information through the other onsite staff. Unless directed by the Incident Commander, all internal communication will be through the radio/cell phone system that Shaw has established.

External communications will be of two types: agency notifications and public information. **Agency notifications** will be made by the Onsite Emergency Coordinator immediately upon confirmation of a release. All notifications will be made utilizing the categories specified in Section II, the Core Plan:

- **Category III** – Offsite major release that may threaten the community or the environment
- **Category II** – Any other offsite releases

- **Category I** – Any release contained onsite

The Local Emergency Planning Commission (LEPC), the State Warning Point, the National Response Center, and the FDEP Phosphate Management Section will be notified of all releases regardless of the category within 15 minutes of confirmation. Followup communication will provide these agencies with updated information as it becomes available.

Public or media communication will be provided by the Receiver or the Department, depending upon the circumstances. However, these communications will focus upon the reporting of incidents and responses. *Interaction with local emergency officials concerning offsite emergency response actions will be coordinated by the Onsite Emergency Coordinator or the Incident Commander.*

(3) Safety

No assessment or response actions that create an exposure or other health or safety risk to any response personnel shall be performed. The consequences of a release do not outweigh protection of human lives. The Shaw Emergency Action (Health & Safety) Plan, a copy of which are kept onsite, will govern all response operations.

Safe assessment and response procedures must be incorporated into every task conducted during every emergency incident. The basis of the Shaw emergency response safety procedures consists of:

- Allowing only **experienced and trained** personnel into the field;
- Providing field personnel (i.e., the “response team”) with a thorough understanding of the hazards and risks present on the Piney Point site;
- Providing field personnel with accurate maps and drawings that illustrate these risks;
- Providing field personnel with state-of-the-art communications and response equipment;
- Maintaining a sufficient staff to permit use of the “buddy system” where appropriate; and

- Training all “response team” members in accordance with Shaw’s safety procedures.

The discovery, assessment, and initial response phases of the response management system shall be governed by several, simple, safety rules:

- *Only Shaw-trained personnel will be allowed to enter risk-zone areas shown on Map 6. All other personnel must be accompanied by an Shaw-trained “host”;*
- *Shaw personnel will conduct a brief safety evaluation of each contemplated action during the assessment and initial response phase;*
- *No personnel will leave the Command Post without the appropriate personal protective equipment (PPE); and*
- *Shaw’s corporate and site-specific safety manual and procedures will not be waived.*

As such, the Shaw site-specific Emergency Action health and safety plan has been incorporated by reference. Implementation of these response management procedures does not invalidate or waive any of the Shaw health and safety policies or procedures.

(4) Liaison

Liaison between the Receiver’s response management team and public emergency response teams, whether federal, state, or local, will be coordinated exclusively through the Onsite Emergency Coordinator or Mr. Van Landingham. While the Department or the Receiver may speak with one or more response organizations, these conversations will occur to apprise environmental, public safety and health, and emergency management agency officials of the circumstances for information purposes, but not for the purpose of coordinating these officials’ emergency response teams actions.

c. Response Operations Guidance

This section of Annex 3 describes the specific operational procedures that will be employed to respond to a release of liquids. The principal purpose of this section is to provide supplemental explanatory text in support of Section II, the Core Plan (see Tab C).

In addition, the following explanatory text has been prepared to familiarize public and contract response personnel with the procedures that the Receiver's team has developed and been trained to implement.

The response actions will, of course, be driven by the type and category of release. At the Piney Point site, the incidents that potentially could occur consist of, in order of severity and risk:

- Offsite releases of more than 1,000 gallons of process water;
- Offsite releases of spilled motor fuels; or
- Offsite releases less than 1,000 gallons of process water.

Lesser events consist of smaller quantity releases of these substances as well as other regulated substances that are known to be present, but in relatively small quantities, in the abandoned Piney Point production facilities, maintenance shops, and laboratories. Due to the small volumes of these other substances present onsite, a very low probability that releases of these substances would migrate offsite, and the regulatory purpose of this Plan, only the above four types of incidents will be addressed in the following subsections.

(1) Operational Response Objectives

If an unplanned release of acidic process water or fuel occurs, there are four operational response objectives:

- a) Take all actions necessary to protect human health;
- b) Stop the release as quickly as possible;
- c) Contain the release onsite if possible; and
- d) Neutralize any offsite releases.

These objectives are hierarchical, commonsensical, and straightforward.

(2) Discharge or Release Control Guidance

There are three possible causes of releases of untreated acidic process water at the Piney Point gypsum stack systems:

- a) Electrical power failure;
- b) Pump, pipe, spillway control structure, or other mechanical failure; or
- c) Dike failure.

While variations inevitably could occur, the root cause of a process water release most likely will be one of the above-listed causes.

Releases of motor fuel or lubricants most likely would be caused by human error during fueling either at the main dispensers or in the field where mobile equipment is refueled. The second most probable cause would be vehicular accidents. All of the mobile equipment employed on the site by Shaw has been rented from nearby equipment dealers, is new, and in good condition. Therefore, equipment failure is not a probable cause.

The following paragraphs address steps to be taken to control each of these types of releases.

Process Water—The Receiver has taken steps to create sufficient onsite storage capacity to permit the process water levels in the lowermost storage areas, the return water canal and the south cooling pond, to be maintained five feet below the crest of the respective retaining dike. In addition, the Receiver has taken steps to improve the integrity of the retaining dikes such that some portion of the freeboard can be utilized for emergency storage.

Experience in 2001 has demonstrated that a failure in the water recirculation circuit can occur for up to 12 hours without risking overtopping of the lowermost south cooling pond. *Therefore, in the event of an electrical or mechanical failure, the following response procedures should be implemented as appropriate:*

- *Shut off the malfunctioning equipment;*

- *Stop decanting process water from the tops of the gypsum stacks;*
- *Switch to the backup pump listed in Table 5 below;*
- *Repair or replace the malfunctioning equipment; and*
- *Return the system to the normal operating mode.*

Table 5
Standby Backup Pumps

Primary Pump Name/Number on Map 2	Capacity	Backup Procedure
Pond Water Pumps (3)	5,000 gpm	In-place spares
DAP Pump	3,500 gpm	1-4,000 gpm diesel
NE Seepage Ditch	1,100 gpm	In-place spare*
East Seepage Ditch	1,100 gpm	In-place spare*
East Ditch	2,000 gpm	In-place spare*

* = Two 1,500 gpm portable diesel-powered pumps also are kept onsite.

Shaw also is maintaining onsite ample supplies of pipe, hose, valves, and fittings to allow fabrication of intake and discharge lines for the backup pumps.

In the event a release is imminent or has been caused by overtopping or partial or complete failure of retaining dike, the release control action will be to divert water flows away from the waterbody where the failure occurred. Map 2 and Table 1 should be referred to when deciding how to divert flows or transfer water to control the release. The portable diesel “Godwin” pumps are the principal onsite resources for transferring water out of a pond, together with the primary pumps shown on Map 2. Responders also should be aware that Shaw maintains a daily inventory of available storage capacity that facilitates decisionmaking concerning the transfer of water to other ponds. Additional guidance is available in the Ardaman O&M Plan.

Ardaman should be contacted immediately in the event of a problem with a retaining dike. In addition, Shaw’s construction team leader, Vernon Giles, should immediately be summoned to the site along with equipment operators to implement earthmoving activities to control a release. Earthmoving activities will be conducted under the supervision of Ardaman’s onsite representative and/or Mr. Giles.

Petroleum Products—Control of releases of petroleum products should be straightforward, depending upon the source of the release. The most likely response will be to shut off the malfunctioning equipment. Transfer of petroleum products leaking from a tank into a trailer also may be an appropriate response action. Unlike process water, petroleum releases likely will be less than 500 gallons.

(3) **Discharge or Release Containment Guidance**

As noted in subsection (2) above, there are two liquids being stored in sufficient quantities at the Mulberry facility that a release could threaten public safety or the environment offsite: untreated process water, concentrated acids, and petroleum products. The following subsections describe procedures that may be effective in containing a release recognizing, of course, that the nature of the release will drive the appropriate response actions.

Process Water—Section I of this Plan and *Map 6* describe and illustrate the probable flowpaths of releases of untreated pond water. The existing topography and drainage patterns are such that complete or partial containment could be achieved for the following theoretical release scenarios:

- If a release were to occur from the southeast corner of the new gypsum stack where no interceptor seepage ditch is installed, the release would sheet flow into the Buckeye Road drainage ditch. Depending upon pre-existing flow conditions in this ditch, the ditch could be blocked downstream near the south cooling pond and portable pumps used to transfer the collected process water into the south cooling pond.
- If a release were to occur from any other location, the above-grade structures are surrounded by seepage ditches that will capture all, or some of the flow. Again portable pumps should be used to supplement the seepage transfer pumps to transfer the collected water into compartments or ponds within the system deemed to be safe by Ardaman.

Petroleum Products—A release of fuels or lubricants should be containable. Onsite construction equipment should be utilized to construct a sump or a cast coffer dam to contain the release. *Also, absorbent booms, pads, and material are stored at the guard house for the purpose of responding to releases of petroleum substances.*

(4) Neutralization (Decontamination) Guidance

Throughout this Plan, the unplanned or uncontrolled release of untreated process water has been characterized as the principal onsite risk. The Receiver has authorized Shaw to implement numerous actions to lessen this risk and the Ardaman O&M Plan outlines the procedures to be employed to avoid overtopping of a retaining dike in the event of sustained or abnormally heavy precipitation. The preceding subsections have described the procedures that should be employed to control or contain a potential or actual release. If, however, all of these procedures fail to prevent an offsite release, the following procedures should be employed to neutralize the release and impacted receiving waters.

Step 1: Quickly Estimate Volume Released. *The most important first step that can be taken is to understand how much process water has been released.* Table 6 is a quick reference that can be used to quickly estimate the volume lost.

Table 6
Volume of Storage per Foot of Freeboard

Stack/Pond	Wetted Surface Acres	Volume (mm gallons)/Vertical Foot
New Gypsum Stack (north)	34.4	11.21
New Gypsum Stack (south)	67.0	21.83
Old Gypsum Stack (south)	24.4	7.95
Old Gypsum Stack (north)	30.1	9.81
South Cooling Pond (north)	28	9.12
South Cooling Pond (south)	25	8.15
DAP Pond	22.7	7.40

Records of once-per-shift staff gauge water level readings are kept at the liming station and the main office to calculate the drop in water elevations needed to calculate the volume released.

Step 2: Obtain Caustic Solution to Neutralize Release. Liquid caustic solution is available from the following sources:

GATX (24-hours/day) at	(813) 241-1113
Walpole (tank trucks) (24-hours/day) at	(800) 741-6800
DSI (tank trucks) (24-hours/day) at	(813) 626-1161 (extension 364)
CTL (tank trucks) (24-hours/day) at	(863) 428-2372

Not all releases will qualify for neutralization. Small releases that occur during high flow periods and are promptly stopped or contained are examples where neutralization may be ineffective. *The key action is to source neutralizing materials while evaluating its efficacy.*

Slaked lime slurry is available at the Piney Point liming station. While lime is not preferable to liquid caustic, its immediate availability warrants consideration for use.

Step 3: Monitor pH Downstream of the Release. In the event of a release offsite, pH monitoring at several locations downstream will provide the information needed to: (1) determine whether *in situ* neutralization will be effective; (2) locate the best neutralization point when considering the release volume and the flow path; and (3) calculate the proper dosage rate. *Maps 6 and 7* illustrate the locations of downstream access points where the pH in the flow way can be monitored.

The preferred monitoring/neutralization scenario is to monitor the pH at the culverts beneath U.S. 41. At these locations the channel geometry is narrow, easily accessible, and ideal for neutralization.

The next most important monitoring points are the bridges that cross the Piney Point Creek and the CSX railroad ditch approximately one-half mile downstream of the Piney Point gypsum stack system. If neutralization is accomplished at the U.S. 41 culverts, then these locations are where to monitor the effectiveness of the response action.

Step 4: Neutralize In Situ. *Attempting to neutralize an offsite release in a flowing stream is at best difficult and can result in greater adverse impacts than the release itself. Also, use of 50 percent caustic solution as the neutralizing solution requires careful consideration of personnel safety and personal protective equipment (e.g., chemical resistant suits, gloves, and boots and face shields). Therefore, any contemplated neutralization efforts must be well thought through and only attempted if sufficient personnel are available.* The following guidance is provided to assist response personnel in “thinking through” a neutralization effort.

Depending upon the volume of the release, the timeliness of the offsite response action, and the pH monitoring data, neutralization using caustic or lime slurry may be possible. A multi-stage neutralization effort is ideal, but may be impractical during a response action. Also, because titration curves cannot be developed, estimates of the caustic solution or lime slurry volumes to be added must be conservative.

The key objective is to obtain pH of about 5.0 to 5.5 standard units. At this pH level, the toxicity of the process water is mitigated to the extent possible through neutralization, but not to the point that pH shock from elevated pH levels occurs. Before attempting to neutralize a release, it will be necessary to calculate the volume of the untreated process water released (see Table 6).

For the purpose of this example, assume that 9 million gallons were released into the Buckeye Road ditch because of a failure of the South Cooling Pond south retaining dike, such that one foot of water drained from the South Cooling Pond. Titrations conducted by the Florida Phosphate Council indicate that ± 5 gallons of 50 percent caustic solution is needed to neutralize 1,000 gallons of pond water. Because the Piney Point plant has been inactive for over 18 months, less will be required due to dilution by rainfall. (The pH of the process water at Piney Point is currently about 3.0 standard units.) Thus, it would be necessary to source 45,000 gallons of 50 percent caustic solution to neutralize a 9 million gallon release, which equates to nine semi-trailer truck loads.

(5) Non-Responders Medical Needs

The types of offsite releases that could occur are limited to releases of untreated process water into the Buckeye Road ditch and/or Piney Point Creek. The worst-case scenario could result in acid burns to people who come in contact with untreated process water in the river.

If response teams are successful in implementing the neutralization plans presented above, no non-responders medical needs are contemplated as being necessary. *If, however, neutralization cannot or is not accomplished, the Manatee and Hillsborough County Sheriff and Emergency Management Agencies need to be apprised of the circumstances in order to alert users of Bishop Harbor and Piney Point to avoid contact with the water until further notice.*

(6) Recovery and Salvage

Recovery and salvage are considered sustained actions that will be implemented by the Receiver, after consulting with the Department. Depending upon the nature of the release, other public response organizations may be consulted as well.

ANNEX 4

INCIDENT DOCUMENTATION

ANNEX 4

INCIDENT DOCUMENTATION

In the event of an unplanned or uncontrolled release, the Receiver will convene a meeting of the response management organization shown in Figure 3 after the response actions have been completed. Representatives of the Department will be invited. The objectives of the meeting will be to: (1) document the incident; (2) critique the response action; (3) identify "lessons learned"; (4) revise Section II, the Core Plan, and all relevant annexes of this Plan; and (5) develop training of the response management organization to implement the changes in this Contingency Plan that will result from the work session.

The Receiver also will consult with the public emergency response agencies who participated in the response action. These consultations will occur prior to the Receiver's in-house meeting discussed above.

The Receiver will consult with the Department throughout all phases of the incident documentation. Representatives of the Department will be apprised of all meeting dates in advance and will be welcome to attend.

ANNEX 5

TRAINING AND EXERCISE DRILLS

ANNEX 5

TRAINING AND EXERCISE DRILLS

a) Statement of Policy

The Receiver requires all employees to receive training prior to working on the Piney Point gypsum stack system. This procedure sets forth the assignment of responsibility for ensuring that the necessary health and safety training, including the various categories of training required for all employees, is fulfilled. Copies of all health and safety training documentation must be maintained by the Incident Commander.

b) Description of Training Procedures

The following procedures have been assigned by the Receiver for administration of the Receiver's training program.

(1) Incident Commander

The Incident Commander is responsible for ensuring that employees either possess or receive the appropriate training prior to assuming the duties for which the training is required. The Incident Commander also is responsible for ensuring that the following in-house training is provided to all response team members:

- General health and safety rules.
- New employee health and safety orientation.
- Respiratory protection (for employees using respirators), including fit-testing and PPE.
- Hazard communication.
- Hearing conservation.
- Response action safety procedures.

In addition, the Incident Commander is responsible for documenting attendance at the above training programs in the form of a sign-in sheet. A copy of the sign-in sheet must be retained onsite.

c) Training Requirements

(1) Basic Training—All field employees must receive the appropriate combination of training **before** working on any parts of the Piney Point gypsum stack system including any response followup investigation and/or cleanup at any site where toxic/hazardous substances are known or are anticipated to exist. If response actions generate hazardous substances, only personnel who have received the training required by OSHA in Title 29 CFR Part 1910.120, “Hazardous Waste Operations and Emergency Response” may be engaged in, or supervise those engaged in the response action.

Required training consists of attendance of a 40-hour health and safety training program. Following completing of the 40-hour training program, the employee must complete an additional 24-hour on-the-job training orientation under the direct supervision of a trained and experienced supervisor. On-the-job training will be documented on the Field Training Acknowledgement Form.

Employees who can demonstrate by documentation or certification that their work experience (minimum 5 years) and/or training is equivalent to that training received by attendance at a 40-hour training program may apply for equivalent training status. These individuals will be required to complete a work history questionnaire, attend an 8-hour refresher training program, and complete and satisfactorily pass a written examination.

(2) Management and Supervisory Training—Additional management/supervisory training program must include the following topics:

- | | |
|--|-----------------------------------|
| 1. The Receiver's health and safety policies and procedures. | 9. Lock out/tag out procedures. |
| 2. Site health and safety plan implementation. | 10. Excavation safety. |
| 3. Calculation of doses and action levels. | 11. Floors, walls, and stairways. |
| 4. Selection and use of PPE. | 12. Ladders. |
| 5. Hazard evaluation and risk assessment. | 13. Temporary electrical service. |
| 6. Selection, use, and care of monitoring equipment. | 14. Confined space. |
| 7. Accident causation and prevention. | 15. Cutting and welding. |
| 8. Accident investigation. | 16. Materials handling. |
| | 17. Hearing conservation. |

(3) **Refresher Training**—Each employee who has received 40-hour initial training, as well as those certified as having equivalent training/experience, must attend an 8-hour refresher training program annually. At a minimum, refresher training must include the following topics:

1. Hazard review.
2. Review of the use and care of PPE.
3. Requirements for, use of, and proper care of respiratory protective equipment.
4. Selected topics such as actual field experience, accident review, health and safety task analysis, etc.

(4) **Training Records**—A record of training must be maintained in each employee's personnel file to document that the individual has received the necessary training and that the training is current. No employee is permitted to perform field activities at the Piney Point gypsum stack system unless their training is current. Training records for all employees consist of sign-in sheets, at a minimum, for those in-house training programs listed in this procedure. Training records for field employees working at the Piney Point site consists of those listed above as well as the 40-hour, supervisory, and refresher training certificates; the Field Training Acknowledgement Form; and training certifications for respirator fit test forms. This documentation must be retained onsite.

ANNEX 6

RESPONSE CRITIQUE AND PLAN AND REVIEW MODIFICATION PROCESS

ANNEX 6

RESPONSE CRITIQUE AND PLAN AND REVIEW MODIFICATION PROCESS

The Receiver intends to review the accuracy and effectiveness of this Plan both on a scheduled basis and, in the unlikely event a release occurs, immediately after termination of the incident response. Critique of the response management system implementation is specifically listed in the Core Plan and Annex 3 as one task in the list of followup actions. The critique will be conducted personally by the Receiver and will provide all parties to the response action, including federal, state, and local emergency planning officials as well as the Department, the opportunity to provide constructive criticism and suggestions for improving the response management system. Internally, the Receiver will convene a separate discussion of the response team for the same purpose; this discussion likely will occur at one of the Receiver's bi-weekly staff meetings.