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1.0 PURPOSE OF AND NEED FOR ACTION

1.1 PROJECT AUTHORITY

This document is a United States Army Corps of Engineers (USACE) Environmental Impact Statement (EIS) that provides a comprehensive environmental analysis to aid in the decision-making process regarding whether to issue a permit for the IMC Phosphates Company's (IMC) proposal to construct and operate a surface mine for the recovery of phosphate rock in Hardee County, Florida, near the community of Ona. The USACE is preparing this EIS in accordance with the Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] 1500-1508), which implement the procedural provisions of the National Environmental Policy Act (NEPA) (42 United States Code [USC] 4321 et seq.). The NEPA is the "basic national charter for protection of the environment," and requires federal agencies to be fully informed about the environmental consequences of their decision to provide financial assistance, exercise permit or regulatory authority, or to conduct an action that may significantly affect the environment. In addition, NEPA mandates that the public be informed of the proposed actions, the consequences of the actions, and the ultimate agency decision.

IMC's proposed mining operations include dredging and filling in waters of the United States (US), including wetlands. Section 404 of the Clean Water Act (CWA) (33 USC 1344) prohibits the discharge of dredge or fill material into waters of the US without a permit. Under Section 404 of the CWA, the USACE is responsible for regulating the placement of fill and discharge of dredged material in the waters of the US, including primary tributaries to those waters, as well as wetlands adjacent to those waters. Therefore, because the IMC project is seeking permit approval from the USACE, a federal agency, to discharge dredge and fill materials into the waters of the US, the project is considered a federal action (Appendix A). Because any environmental consequences of IMC's proposed project are essentially products of the USACE's permit action, the scope of the federal permitting action includes all of the IMC project components (33 CFR 325). During the federal permit review process, the USACE determined that an EIS would be necessary to address the environmental consequences of the proposed project and to aid in the decision to issue, modify, condition, or deny a permit for the proposed project. The USACE is the lead federal agency and responsible for preparation of the EIS. The USACE and IMC have agreed to use the Third Party procedure for the preparation of the EIS. Golder Associates Inc. (Golder) has been approved by the USACE as the Third Party consultant and has been retained by IMC to assist in preparing the EIS.

This chapter describes the purpose of and need for the Proposed Action. This chapter also summarizes the USACE's procedures for implementing NEPA, and the relevant federal, state, and local regulations and policies associated with IMC's proposed project.

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1.2 PROPOSED PROJECT OVERVIEW

The Proposed Action involves the construction and operation of a surface mine for the recovery of phosphate rock from IMC's 20,676-acre property in western Hardee County near the rural community of Ona, Florida (Figure 1.2-1). As proposed, IMC would mine 15,527 acres of the Ona site, and recover approximately 103 million tons of phosphate rock. An additional 309 acres would be disturbed, and approximately 4,839 acres, or about 23 percent of the entire Ona site, would not be disturbed. IMC proposes that initially, only mining and reclamation would occur on the Ona site. The phosphate matrix would be shipped to the existing IMC plant at the Fort Green Mine in Polk and Hardee Counties for beneficiation (a process by which sand and clay are separated from the phosphate). At a later date, which is as yet undetermined, a new beneficiation plant would be constructed at the Ona Mine site, and would include a washer, flotation plant, product inventory, shipping facility, and miscellaneous support facilities. Once the new plant is operational, the reserves remaining at the Ona Mine would be processed at the new Ona Mine plant. There would be no chemical plant, gypsum stack or rock dryer at the Ona Mine.

Over many decades, substantial portions of the Ona site have been converted from their natural state to agricultural use, chiefly as improved pasture. The natural ecosystems on most of these agricultural lands have been altered for the agricultural use. IMC proposes to mine these areas and to reclaim them to a blend of agricultural use and natural habitat. However, within the property there are areas that have historically been less disturbed and have ecological value. Consequently, IMC proposes not to disturb about 4,839 acres of such less disturbed land, which is approximately 23 percent of the total acreage of the Ona site.

IMC plans to use the "opencast" surface mining method for development of the Ona Mine. With this method, large electrically powered excavators (draglines) first remove and set aside the overlying soil "overburden," and then excavate the phosphate ore "matrix". The matrix is placed into a shallow depression at the ground surface by the dragline, where the matrix is disaggregated and converted to slurry by mixing it with water. Electrically powered pumps are used to transport the matrix slurry through pipelines to the beneficiation facility, where the phosphate rock is separated from sand and clay that are also found in the ore.

The proposed operations would involve mining and processing methods that are commonly used in the extraction and processing of phosphate ore in the Central Florida Land-Pebble Phosphate District. Major phases of the proposed operation would include:

1. Clearing and preparing the site for operations, then constructing initial settling areas, perimeter ditch and berm systems, wells, water and wastewater control and recirculation systems, transportation systems, and other ancillary operations;

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2. Extracting the phosphate ore-bearing matrix by electric-powered dragline;
3. Transporting the matrix to the beneficiation plant by slurry pipeline;
4. Physically separating the phosphate ore from the sand and clay (wastes);
5. Disposing of the sand and clay wastes;
6. Shipping the phosphate ore from the facility by rail; and
7. Reclaiming or restoring the disturbed areas.

Once mining activities are completed in an area, three distinct methods of reclamation would be used to create the post-reclamation landscape. These methods are: 1) sand fill with overburden cap, 2) shaped overburden (land and lake), and 3) crustal development for reclamation of clay settling areas. These methods are described in more detail in Chapter 2.0 of this EIS.

This EIS analyzes the potential impacts of constructing and operating the IMC's mine at the proposed location described above. Several alternatives to the Proposed Action were considered, and two were analyzed in detail as part of this EIS.

1.3 PURPOSE OF AND NEED FOR PROPOSED PROJECT

1.3.1 Project Purpose

For the purpose of this EIS, the USACE has determined that the basic purpose of the Proposed Action is to construct and operate a phosphate mine in western Hardee County near the rural community of Ona, Florida. The overall purpose of the mining activities is to extract and process naturally occurring phosphate for various uses throughout the world.

1.3.2 Project Need

Phosphate is essential to every living thing because it is necessary for many of the biochemical molecules and processes that define life itself. Phosphate is a natural, non-renewable resource that is obtained by mining phosphate-containing minerals. Humans and animals get phosphate from the foods they eat, and plants get phosphate from the soil along with nitrogen, potassium and a number of other nutrients they need to thrive. Fertilizer is added to nutrient-deficient soil to replenish these vital minerals. Approximately 90 percent of the phosphate that is mined is used to produce phosphate fertilizers. Another five percent is used to make animal feed supplements, and the remaining five percent is used to make a variety of products such as soft drinks, toothpaste, or metal coatings (Florida Institute of Phosphate Research [FIPR], 2001).

Phosphate deposits are found all over the world, however, not all of these deposits are considered mineable. A mineable reserve is one that is economically feasible to mine in light of current markets and technologies. The US produces the most phosphate in the world, while Morocco and China rank second and third, respectively. Florida's phosphate industry is one of the major sources of phosphate fertilizer internationally because the US

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has the transportation and industrial infrastructure needed to produce and export the product. Additionally, the Florida phosphate deposit is one of the most economically accessible deposits in the world because a substantial layer of phosphate is only 15 to 50 feet below a soft overburden. Because of the economic attractiveness of the Florida phosphate deposits and the existence of transportation infrastructure and nearby fertilizer plants, Florida is presently providing approximately 75 percent of the nation's supply of phosphate fertilizer and about 25 percent of the world's supply (FIPR, 2001a). If this were to change, dependence on foreign sources for the supply of phosphate could render the US fertilizer industry uncompetitive in the world market (IMC, 2002).

IMC is the world's leading producer of concentrated phosphates and accounts for 30 percent of the US capacity and nine percent of the world capacity. IMC uses phosphate in the production of phosphate-based agricultural fertilizers and animal feed supplements. IMC is currently mining phosphate from the Fort Green Mine and Fort Green Southern Reserves tract in central Florida. Mining reserves on these tracts will be depleted in approximately three years. The Ona site is adjacent to the Fort Green site and this proximity would allow IMC to initially continue to use the existing Fort Green Beneficiation Plant and mine infrastructure, thus extending the useful life of these facilities. Mining the Ona site would also maintain or increase the number of jobs and the amount of taxes provided to the region (IMC, 2002).

Clearly, phosphate mining and processing is an important Florida industry. Currently this industry in Florida directly employs nearly 8,000 workers, and more than 40,000 in secondary and tertiary supporting businesses (IMC, 2002). The importance of the industry is recognized in Florida Statutes (FS), which state, "The extraction of phosphate is important to the continued economic well-being of the state and to the needs of the society" (FS 378.202).

Since there is no substitute for phosphate, and because of the important role of phosphate-based fertilizers in sustaining high levels of agricultural production, phosphate mining and processing will continue to be a necessary and important US industry. Therefore, IMC has foreseen the need to mine the Ona site to continue to produce phosphate fertilizer and animal feed, to maintain or expand jobs within the region, and to maintain or increase economic benefits to the region.

The USACE relies upon IMC to determine that appropriate economic evaluations have been completed, the proposal is economically viable, and is needed in the marketplace.

1.4 NEPA PROCESS

The NEPA process requires federal agencies to make informed decisions about the consequences of their actions and to facilitate public involvement during the decision-making. IMC is seeking permit approval from the USACE to discharge dredge and fill

material into waters of the US under Section 404 of the CWA. As a federal agency issuing or denying the federal permit, the USACE is the lead federal agency in NEPA compliance and in the evaluation of the consequences that the action may have on the natural and human environments. The Project Approval Framework (see Section 1.6) provides a description of other federal, state and local government requirements for the proposed IMC project.

1.4.1 Public Involvement

To promote open communication and better decision-making, the USACE encourages public involvement in the NEPA process. All persons and organizations that have a potential interest in the proposed IMC project are invited to participate in the NEPA process. For information on public involvement to date, see Section 1.4.3.2 and Section 6.0.

1.4.2 Notice of Intent

The Notice of Intent (NOI) to prepare an EIS is the first step in the NEPA EIS process. The NOI notifies the public that the agency intends to prepare an EIS for a specific proposed action. The USACE published the NOI to prepare an EIS for the proposed IMC project in the *Federal Register* on August 14, 2000.

1.4.3 Scoping

1.4.3.1 Requirements

The NEPA regulations recommend that the environmental review process include project scoping activities to identify agency and public concerns and identify reasonable alternatives that meet the purpose and need for the proposed action. In addition, scoping helps to define issues to be examined in detail in the NEPA document, and can save time in the overall process by ensuring that draft documents have addressed all relevant agency and public concerns, which if brought up at the end of the NEPA process could require time consuming re-analysis.

Scoping is comprised of a number of activities, which ideally occur very early in the NEPA process, when the purpose and need and reasonable alternatives are being identified. Scoping requires ongoing investigation of possible issues that may come to light during the preparation of the EIS. The primary emphasis of the scoping task is the first cut evaluation and conceptualization of the issues to be investigated and the relation of those issues to the formulation of alternatives. Once issues are identified and initial concerns solicited through scoping activities, detailed analysis and writing of the EIS occurs in the next stage of preparation. Some scoping activities such as public involvement and identifying issues of concern begin early but continue throughout the process.

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1.4.3.2 Project Scoping

IMC prepared the Consolidated Development Application (CDA) as a result of over four years of public and agency coordination. In addition, this coordination served as the scoping process for this EIS. From 1997 through 2000 an intensive series of meetings, workshops, field tours, and work sessions were convened as part of the permitting process for the Ona Mine. An Agency Work Group (AWG) and the Public Work Group (PWG) were created to coordinate the permitting process. The USACE was a member of the AWG.

Facilitators from the Florida Conflict Resolution Consortium (CRC) and the Florida Department of Environmental Protection (FDEP) worked with non-governmental organizations (NGOs) and interested citizens to generate a list of issues and/or questions that members of the public wanted to be addressed in the CDA. These were incorporated into the CDA workplan. The result of these interactions and discussions is the Application Information Document (AID) published by IMC in October 1998, and provided to the AWG and PWG members.

In addition, the CRC and FDEP facilitators worked with a large group of representatives from regulatory agencies, environmental organizations, interested citizens, counties, and other NGOs to address the environmental, social, and economic issues related to the proposed Ona Mine. The outcome of this process was the identification of Alternatives and Team Permitting Agreement described in Section 1.6.1. A list of the AWG and PWG members is included in Section 6.0 - Public Involvement. Two points of note regarding the members of these groups are: 1) there has been significant involvement by key personnel from agencies that are not parties to the Agreement (e.g., the US Fish and Wildlife Service [USFWS]); and 2) the level of participation by numerous citizens and NGOs was very good considering that meetings often occurred during working hours. Also noteworthy is that the US Environmental Protection Agency (USEPA) Region 4 has followed the process and provided comments and input.

Facilitated by the CRC, the agency permitting team and IMC developed and signed a non-binding Team Permitting Agreement. The Agreement outlines the procedures and schedule that would be followed to consolidate a series of otherwise independent permitting procedures into one concurrent and coordinated review by all responsible agencies. At the conclusion of the coordinated review, each agency would proceed with its own permitting process under applicable laws and regulations. Signatory parties to the Agreement are: IMC, FDEP, the Southwest Florida Water Management District (SWFWMD), the Florida Department of Community Affairs (FDCA), the Florida Fish and Wildlife Conservation Commission (FFWCC), the Central Florida Regional Planning Council (CFRPC), the Tampa Bay Regional Planning Council (TBRPC), DeSoto County, Hardee County, Manatee County, and the USACE.

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Two sub-groups of the AWG and PWG were formed near the outset of the process in early 1998. These sub-groups were the natural systems sub-group, and the hydrology sub-group. The purpose of the two sub-groups was to focus agency personnel in their area of technical expertise and responsibility, allow members of the public and NGOs to participate in addressing selected issues of interest, and to keep the overall process moving forward. Periodic joint meetings of both sub-groups and the combined AWG and PWG were conducted. Additionally, small work groups including natural systems and hydrology specialists from the participating agencies were also convened.

The initial task of each sub-group was to review and approve a series of workplans to acquire site-specific information about the existing, or baseline, vegetative communities, wildlife, threatened and endangered plant and animal species, wetlands, surface water, groundwater, floodplains, storm water, transportation, and archaeological and historical resources on the proposed site. The group also reviewed the mine and plant design basis. In early 1999, agency comments on the workplans were consolidated and the workplans were "accepted" by all responsible regulatory agencies as being sufficient to provide the information necessary for preparing complete permit applications.

The natural systems sub-group concentrated its efforts on classifying areas of the site as areas to be mined and areas of consideration interest, and began an iterative process of modifying IMC's initial proposal. The group first identified areas of the proposed site that possessed ecological attributes sufficient to justify not disturbing these areas by mining operations. Areas that met these qualifications were termed "areas of conservation interest" by the AWG.

AWG members used the wildlife survey results and the upland and wetland vegetative descriptions and analyses to identify potential areas of conservation interest. In addition, certain AWG members participated in site tours and separate discussions concerning the ability to reclaim mined land to specific habitat types.

These efforts led to the AWG delineating areas of conservation interest in July 1999. Throughout the August 1999 through July 2001 period, additional meetings and site tours were attended by both AWG and PWG members, leading to the development of the various Alternatives studied in this EIS.

1.4.4 Public Review of Draft EIS

This draft EIS is being made available for public review and comment. The Notice of Availability (NOA) of the draft EIS was published in the Tampa Tribune, Wauchula Herald Advocate, Sarasota Herald Tribune, and the Charlotte Sun Herald newspapers. In addition, copies of the draft EIS have been provided to local libraries. Agencies, organizations, and individuals are invited to review and comment on the document. A 45-day review period has been established to allow reviewers the opportunity to comment on

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the analysis or other aspects of the EIS process. A list of those individuals and organizations that received the Draft EIS for review is included in Appendix H.

1.4.5 Public Meetings

The USACE may conduct a public meeting to solicit comments concerning the adequacy of the draft EIS and the merits of the alternatives analyzed. If held, the public meeting will occur during the 45-day review period following publication of the NOA of the draft EIS. The location and time of any public meeting will be announced in the Tampa Tribune, Wauchula Herald Advocate, Sarasota Herald Tribune, and the Charlotte Sun Herald newspapers.

1.4.6 Final EIS

The USACE will consider all comments provided by the public and agencies on the draft EIS. The final EIS will incorporate changes suggested by comments on the draft EIS, as appropriate, and will contain responses to all comments received during the review period. A copy of the final EIS will be made available either directly, on the internet, or through the public library to all those who comment on the draft EIS. Copies of the final EIS will be mailed to selected federal, state, and local agencies. Copies will also be placed in local public libraries for review. An NOA of the final EIS will be published in the *Federal Register*.

No sooner than 30 days following completion of the final EIS, during which time further comments may be submitted for USACE consideration, the USACE will prepare a Record of Decision (ROD), which will state the decision to approve or deny the Department of the Army permit for the IMC project. If the proposed project is approved, the ROD will include any conditions or mitigation measures associated with its approval.

1.5 RELATED ENVIRONMENTAL DOCUMENTS

The following current permitting documents as well as historic site-specific and area-wide documents are of relevance to this draft EIS study:

1. Consolidated Development Application for IMC's Ona Mine in Hardee County – Submitted in April 2000.
2. Additional Information to the Consolidated Development Application under the Ecosystem Management System Team Permitting for the Ona Mine, Submittals 1, 2, and 3 – March 30, 2001, September 28, 2001, and February 18, 2002, respectively.
3. IMC's Four Corners Mine Addition Phase I, Development of Regional Impact Southeast Tract – Dated July 2000.

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4. Consolidated Development Application for Farmland Hydro Hardee County Mine – Submitted November 2000.
5. IMC's Fort Green Mine Southern Reserves, Development of Regional Impact – Dated December 1990.
6. CF Mining Corporation Hardee Phosphate Complex II Draft Environmental Impact Statement – Dated March 1988.
7. Mississippi Chemical Corporation Development of Regional Impact – Dated 1977.
8. Mississippi Chemical Corporation Draft Environmental Impact Statement – Dated August 1981.
9. USEPA's Central Florida Phosphate Industry Areawide Impact Assessment Program (Areawide IAP) – Dated September 1978.
10. USEPA's Central Florida Phosphate Industry Final Areawide Environmental Impact Statement (Areawide EIS) – Dated November 1978.

1.6 PROJECT APPROVAL FRAMEWORK

The proposed IMC project is subject to regulatory review by several federal, state and local government agencies. These agencies have planning, review, and regulatory authorities over the Proposed Action and its alternatives. Section 1.4 briefly described the NEPA process and the USACE's responsibilities under NEPA. The Team Permitting Agreement for the project is also described, and permits and approvals needed for each of the project's components are listed in Tables 1.6-1 through 1.6-3.

Regulatory agency and local government approvals necessary to authorize changes to the currently approved Fort Green Mine and Fort Green Southern Reserves Developments that would be required for the proposed Ona Mine include:

1. Approval by the Polk County Board of County Commissioners to allow continued use of the Fort Green Beneficiation Plant, related mine infrastructure, and the utility corridor between the Fort Green Washer and Beneficiation Plant and the Fort Green Southern Washer as part of the normal bi-annual review;
2. Modification to the FDEP conceptual reclamation plan to allow continued use of the above-described Fort Green Mine facilities, siting of the new clay settling areas, and a change in the conceptual reclamation plan land use and time schedule;

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3. Modification to the FDEP (#0142476-004) and USACE dredge and fill permits for the Fort Green Southern Reserves tract (#199201545, Mod.#9); and,
4. Approval of a Development of Regional Impact (DRI) Development Order by the Hardee County Commission to amend the Fort Green Southern Reserves Development Orders to allow siting of the proposed clay settling areas and revisions to the post-reclamation topography and vegetative conditions, and to extend the life of the approved DRI.

The above set of approvals are the only ones specifically triggered for the Ona Mine so IMC can continue using its existing phosphate ore washing and beneficiation facilities and construct additional clay settling areas on the Fort Green Southern Reserves tract. For example, it would be necessary to obtain earthen dam construction and operation permits as well as authorization for surface and groundwater discharge for each proposed clay settling area from FDEP, regardless of whether they are located on the Ona or the Fort Green Southern Reserves tracts. With respect to these approvals, the only difference is the location of these settling areas. IMC has an existing SWFWMD Water Use Permit (WUP) that allows enough withdrawal to cover the projected water requirements at Ona. Therefore, a water use permit is not listed in the following tables. However, future renewals of the existing permit would need to reflect continued withdrawals from the currently permitted Fort Green and Ona wells; other than this change in location, no other permit changes would be required.

1.6.1 Team Permitting Agreement

As described earlier, facilitators from the CRC helped the agency permitting team and IMC develop a non-binding Team Permitting Agreement. The Agreement outlines the procedures and schedule that would be followed to consolidate a series of otherwise independent permitting procedures into one concurrent and coordinated review by all responsible agencies. At the conclusion of the coordinated review, each agency would proceed with its own permitting process under applicable laws and regulations. Signatory parties to the Agreement are: IMC, FDEP, the SWFWMD, the FDCA, the FFWCC, the CFRPC, the TBRPC, DeSoto County, Hardee County, Manatee County, and the USACE.

Representatives of FDEP, CFRPC, Hardee County, SWFWMD, and IMC worked collectively to consolidate the questions in each application for each of the permits listed in Tables 1.6-1, 1.6-2 and 1.6-3 into the list of 26 questions that comprise the CDA. Thus, the intent of the CDA was to provide the information required in the application forms and support documents for all of these approvals.